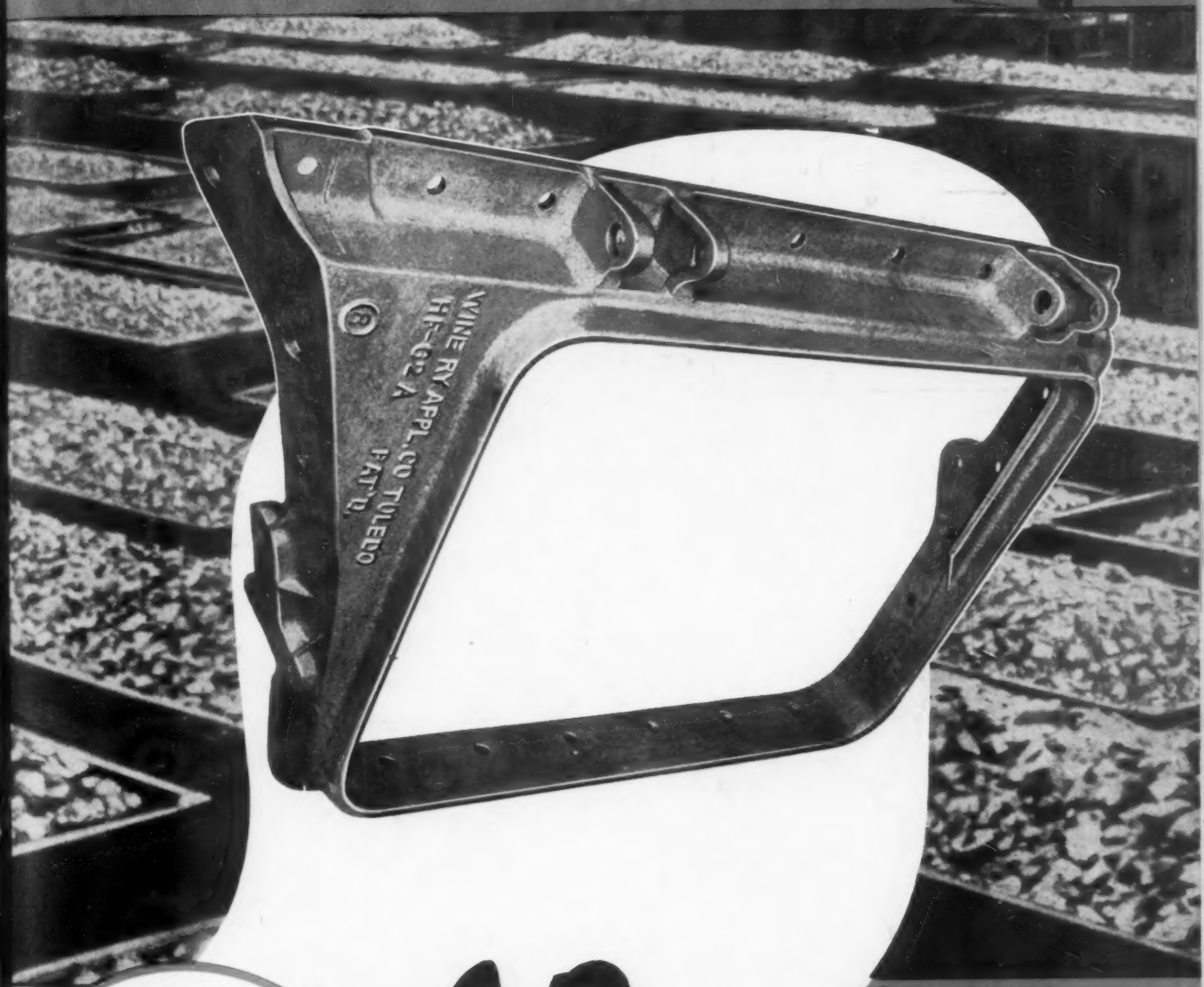
FEBRUARY 10, 1945

Railway Age

Founded in 1856



WINE

CAST STEEL

62 railroads

ARE NOW USERS OF

HOPPER FRAMES

THE WINE RAILWAY APPLIANCE CO.

7 RIGID TESTS FOR CHILLED CAR WHEELS

THE 7 RIGID TESTS THAT GUARANTEE UNIFORMITY

1. Chill test block taken at least once in every ten wheels poured.
2. One complete chemical analysis with each heat.
3. Constant pyrometer checks for accurate processing temperature.
4. Drop test of finished wheel (A.A.R. Specifications).
5. Thermal test of finished wheel (A.A.R. Specifications).
6. *Test for Rotundity.*
7. Brinell Hardness test for maximum and minimum chill limits.

Test No. 6

TEST FOR ROTUNDITY:

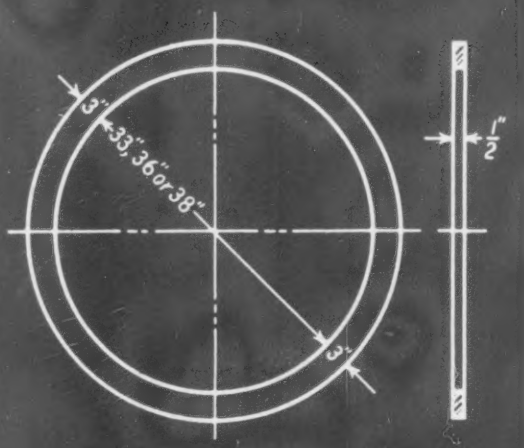
Rotundity is an extremely important consideration in a car wheel, so much so that the A.A.R. Specifications place a limit of 1/32-in. on this feature.

The process employed in the manufacture of chilled car wheels is admirable from the standpoint of achieving rotundity.

A chiller ring is employed, which forms the flange and tread section of the mold into which the molten metal is poured.

This chiller ring is machined to perfect rotundity, to produce the prescribed tread and flange contour, and the casting naturally follows the contour of the accurately machined chilling surface of the chiller.

Accompanying drawing shows the A.A.R. standard gauge for checking the rotundity of wheels.



★ ★ ★ ★

OUR RAILROADS can take pride in the record of their wartime performance — unfailing in a continuing emergency.

★ ★ ★ ★

3083

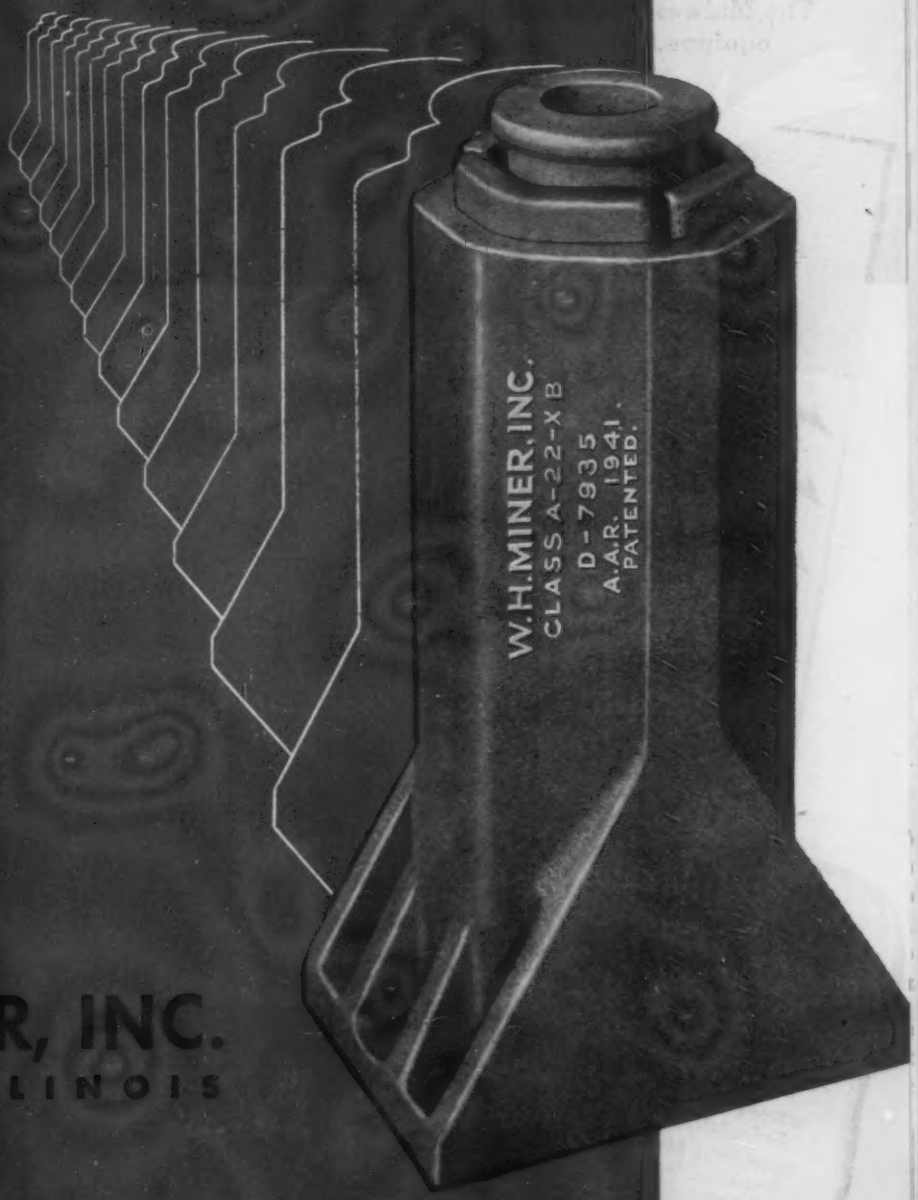
ASSOCIATION OF MANUFACTURERS OF CHILLED CAR WHEELS

230 PARK AVENUE, NEW YORK, N. Y. • 445 NORTH SACRAMENTO BOULEVARD, CHICAGO, ILL.

Organized To Achieve: Uniform Specifications — Uniform Inspection — Uniform Product

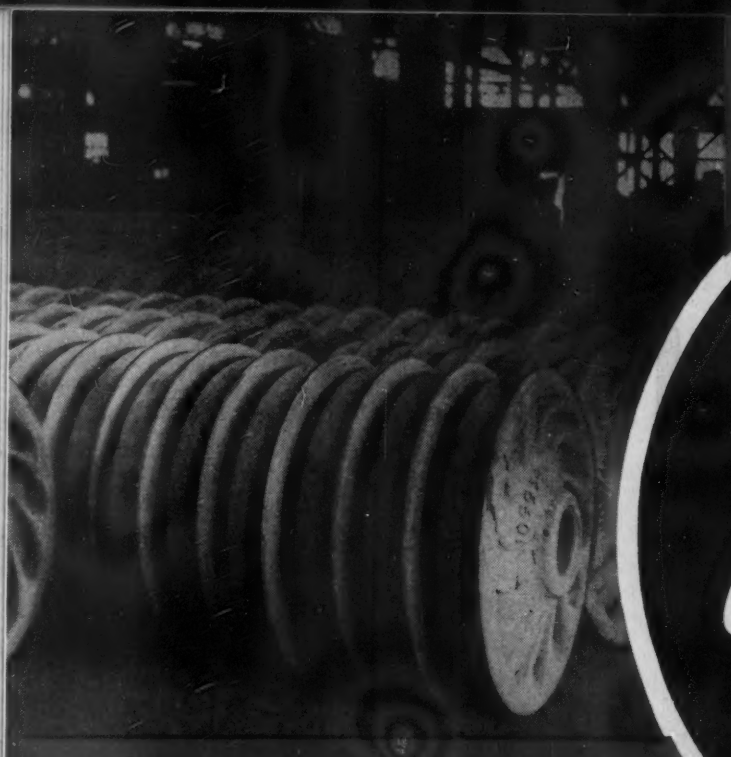
Published weekly by Simmons-Boardman Publishing Corporation, 1309 Noble Street, Philadelphia, Pa. Entered as second class matter, January 4, 1933, at the Post Office at Philadelphia, Pa., under the act of March 3, 1879. Subscription price $6.00 for one year U. S. and Canada. Single copies, 25 cents each. Vol. 118, No. 6.

LASTING QUALITY



MINER
FRICTION DRAFT GEAR
CLASS A-22-XB

W. H. MINER, INC.
CHICAGO • ILLINOIS



The Midwest's most completely equipped wheel foundry.

Keep 'Em Out of the Shop on

THESE SEVEN CHECKS CONTROL MT. VERNON QUALITY

1. Chill test block taken at least once in every 10 wheels poured.
2. One complete chemical analysis block with each heat.
3. Constant pyrometer check for accurate processing temperature.
4. Drop test of finished wheel (A.A.R. Specifications).
5. Thermal test of finished wheel (A.A.R. Specifications).
6. Test for perfect rotundity.
7. Instrumental test for Brinell hardness.

Mt. Vernon Chilled Car wheels are bearing their share of the load in America's greatest transportation job—perhaps *more*, because Mt. Vernon wheels are made with the best equipment available, which, together with the Mt. Vernon tradition of quality assures the utmost mileage under the severe conditions of war transportation.

MT. VERNON CAR DIVISION: Complete Line of Freight Cars

LOCOMOTIVE DIVISION: Diesel, Diesel-Electric, Electric, Steam, and Fireless Steam Locomotives.

PROCESS EQUIPMENT DIVISION: Complete Line of Chemical, Food, and Petroleum Refinery Equipment.

QUIMBY PUMP DIVISION: Screw, Rotex, Centrifugal, Chemical Pumps.

ORDNANCE DIVISION: Projectiles, Heavy Forgings, Breech Blocks, Winches.

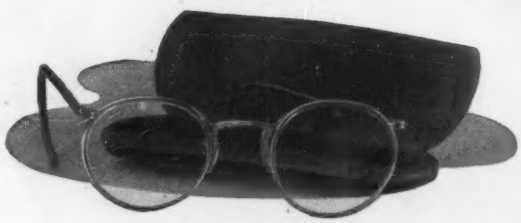
MT. VERNON

Division of H. K. PORTER

PITTSBURGH, PA. · BLAIRSVILLE, PA. · MT. VERNON, ILL.

MT. VERNON
CHILLED CAR WHEELS
MT. VERNON CAR MFG. CO. MT. VERNON, ILL.
Member
A.M.C.C.W.
"New Wheels for Old"
Exchange Plan
CAR MFG. CO.
COMPANY, INC.
NEW BRUNSWICK, N. J. NEWARK, N. J.
PORTER
"Better Built"
Equipment

A SPECK OF STEEL LODGED IN AN EYE . . . CAN COST MORE THAN A DIAMOND



Valueless in itself, this speck of steel became costly in the split second it took to cause an eye accident. The final bill was $343.00.*

An adequate eye-protection program demands a place in every *cost reduction* program. And, because American Optical Safety Goggles are light, cool, comfortable and easy-to-wear, their protection is now readily accepted by workers in every field of industry.

Ask your Safety Director to consult with an A. O. Safety Representative. There is an American Optical Branch Office in every large industrial center.

*Average cost of compensation and medical treatment for eye accidents, according to insurance company figures.

American Optical

COMPANY

SOUTHBRIDGE, MASSACHUSETTS

MERCY TRAINS---II

From station platforms all over the U. S. today, you can call a roll of heroes' names as hospital trains move past.

There's Svboda, the blond Buffalo kid who caught all that flak in his chest over the Ruhr; Kelley of Grand Rapids, shrapnel-riddled since Aachen; Miller of Denver with his leg in a traction splint now; Martinez of Santa Fe with an arm gone since Saipan. . . .

From rows of cots in car after car, they're getting their first look at America once more, and Lord, what their own hills mean after years of battle hell!

Into that first trip of these gallant sons come home, U. S. railroads are putting all the expert, careful operating that's so well deserved. You get a glimpse of it on Staten Island, New York—

Here the ships dock, and wounded are transferred by ambulance to Halloran Hospital, there to be classified as to injury and destination. This information goes to the Baltimore & Ohio Railroad, which then schedules necessary train movements as to day and hour.

The railroad assembles just the right complement of ward cars, kitchen cars, baggage cars, and Pullmans in the nearby Arlington yards. Each ambulance which carries the men from Halloran to the train has been assigned its place in a convoy, and is numbered to match a hospital car number. Men for the nearest hospitals are in train-end cars, which can be cut off quickly at transfer points. There's no confusion or jostling, only care and tender solicitude.

B&O trains load and depart to coincide in timing with schedules of the Pennsylvania, the New York Central, Lehigh Valley, Reading, Central Railroad of New Jersey, and other receiving roads. Locomotives must be on the job day and night, ready for duty. Understanding yard crews couple the trains with such care that men three cars away don't even feel it.

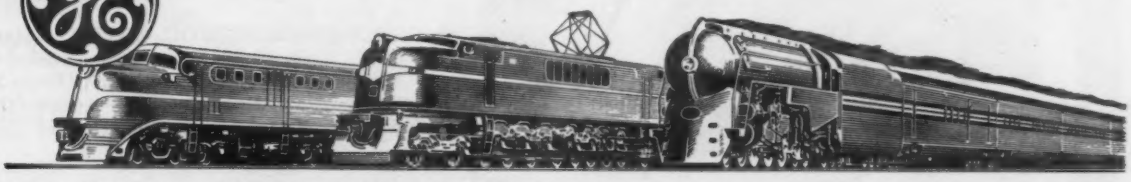
In my last dispatch, I told of Uncle Sam's railroaders operating hospital trains in the battle zones. Here on Staten Island, civilian railroaders finish the job—they labor to speed home in comfort the veterans who have won well-deserved release from war.

*—The Trackwalker**

★ ★ ★

In a typical month, at an eastern railroad center, 8 Alco-G.E. 1000-hp diesel-electric switchers were available 98.7 per cent of the time, and in actual use 87.3 per cent. High availability made high utilization possible, reduced costs, and increased earning power.

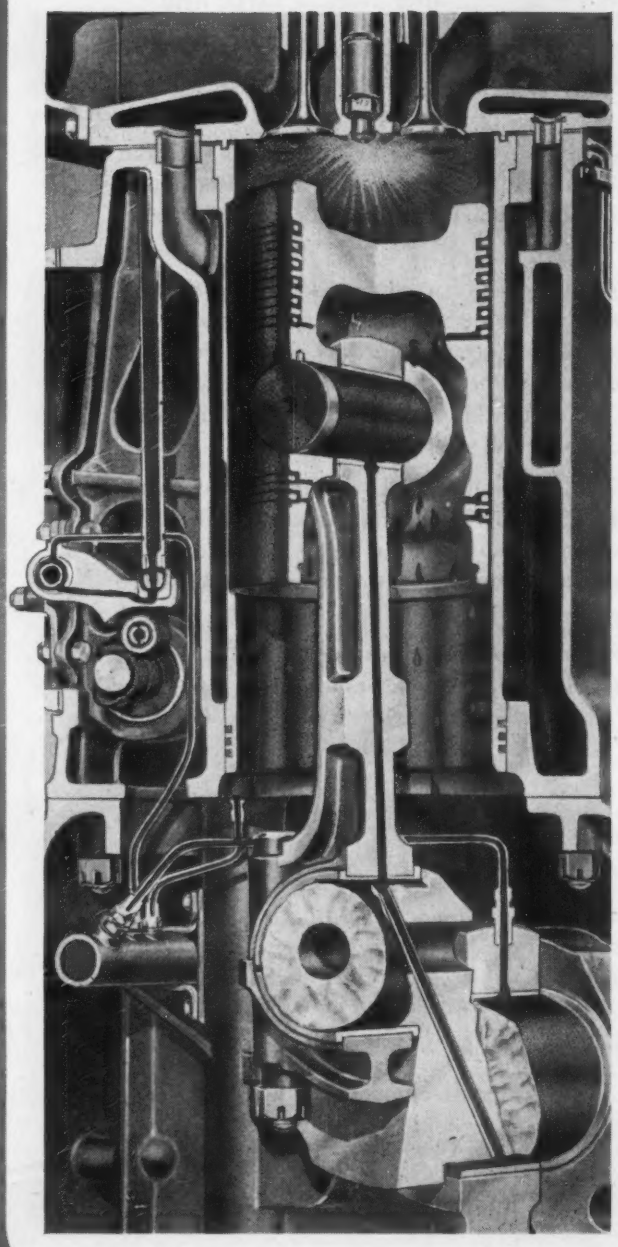
Alco GE



AMERICAN LOCOMOTIVE • GENERAL ELECTRIC

Copr., 1945, American Locomotive Company and General Electric Company **Reg. U. S. Pat. Off.* 113-118-9500

FULL POWER AHEAD ON EVERY TRACK!



BIG DIESELS . . . and All Railroad Equipment kept at Peak Efficiency with New Advances in Lubricants by SOCONY-VACUUM!

MAXIMUM availability of Main Line Diesels, like the one cut-away at the left, calls for a lubricating oil that will keep rings, pistons and valves *free* from hard carbon deposits.

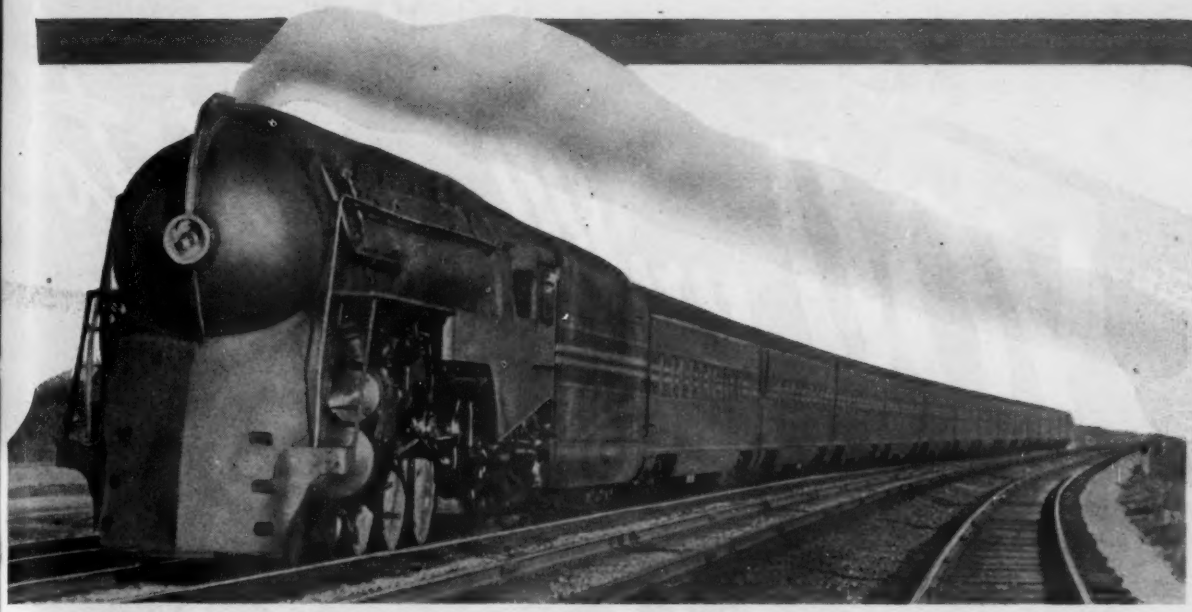
This same oil must form strong films that will resist rupture, even when squeezed to microscopic thinness.

Gargoyle D.T.E. Oils Nos. 1 to 5 are specifically designed to meet these exact requirements. They reduce carbon deposits to a minimum and those deposits which do form, are soft and fluffy and are easily removed.

These same famous oils also are setting high performance records in large stationary Diesels and are preferred by ship operators all over the world.

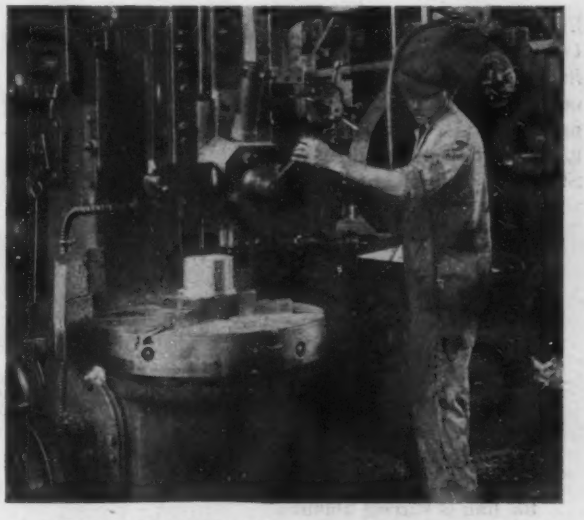
Get these Gargoyle D.T.E. Oils in your Diesels for dependable performance . . . and to assure "ready-to-run" engines at all times.

SOCONY-VACUUM OIL CO., INC. • Standard Oil of N. Y. Division • White Star Division • Lubrite Division • Chicago Division • White Eagle Division • Wadhams Division • Magnolia Petroleum Company • General Petroleum Corporation of California.



STEAM LOCOMOTIVES. For air pumps, special oils are available that protect vital parts from wear, reduce ring and valve-clogging deposits to a minimum. On driving journals, Socony-Vacuum's special driving journal grease gives dependable performance. There's a Gargoyle product for every steam locomotive need.

MAINTENANCE OF WAY. Working closely with makers of maintenance-of-way equipment, Socony-Vacuum has developed specific recommendations for all tools and their motors.



SHOP LUBRICATION. For every shop machine you operate Socony-Vacuum offers not only latest lubrication developments, but scientific application to assure highest efficiency at least cost.

GARGOYLE

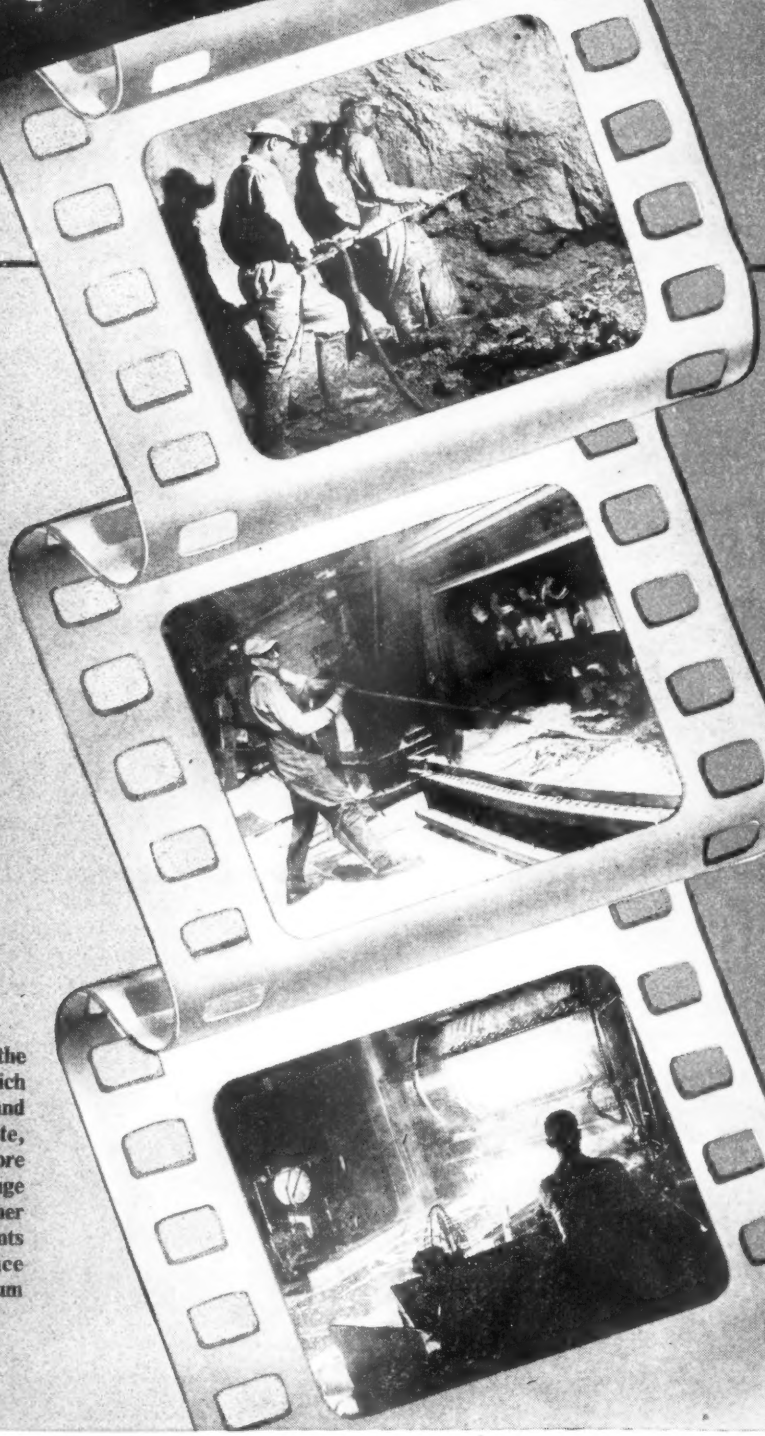
Railroad Lubricants

IT PAYS TO KNOW WHAT'S NEW IN LUBRICATION

SOCONY-VACUUM

OIL COMPANY, INC.

YOU will want to



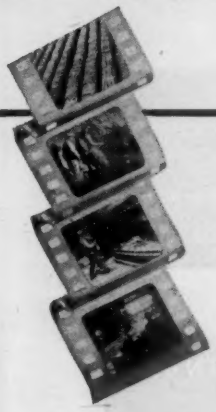
FROM REYNOLDS OWN MINES comes bauxite ore for Reynolds aluminum. Reynolds now mines more bauxite than was mined in the entire United States before the war.

ALUMINA, made from bauxite, is reduced to pure aluminum in giant electric pots or furnaces in Reynolds plant at Listerhill, Alabama. "Pot puncher" in the film is stirring alumina into molten cryolite.

SCENE AT ONE of the many rolling mills which turn out Reynolds plate and sheet aluminum. To date, Reynolds has rolled more square feet of light gauge aluminum than any other company. Reynolds plants are equipped to produce large tonnages of aluminum for post-war needs.

See This Film...

the dramatic story of ALUMINUM



HERE is a 34-minute educational film on aluminum that is jam-packed with interesting information on its processing... from the mining of bauxite, refining it to alumina, reducing the oxide to metal ... right on through to the rolling of sheet, rod and bar . . . and the manufacture of fabricated parts.

"A Recital of Faith"

This film, titled "A Recital of Faith," portrays the great advances in aluminum technology during the war years, and the infinite possibilities for aluminum in the post-war world.

Underlined is the part the Reynold Metals Company is prepared to play in co-operation with engineers and manufacturers who are now using, or plan to use aluminum, and the new lightweight, high-strength aluminum alloys.

Showings Easily Arranged

More than 10 million people have seen "A Recital of Faith." Every audience that has seen it has praised it in glowing terms.

This film is now available, without charge, for showings before technical groups, engineering societies, manufacturers, clubs, purchasing agents, foremen training and other interested groups. 35 mm. or 16 mm. sound.

Write for It Now

Just address Reynolds Metals Co., Aluminum Division, 2500 S. Third Street, Louisville 1, Ky. On your letterhead, please.

REYNOLDS METALS

REYNOLDS

The Great New Source of **ALUMINUM**

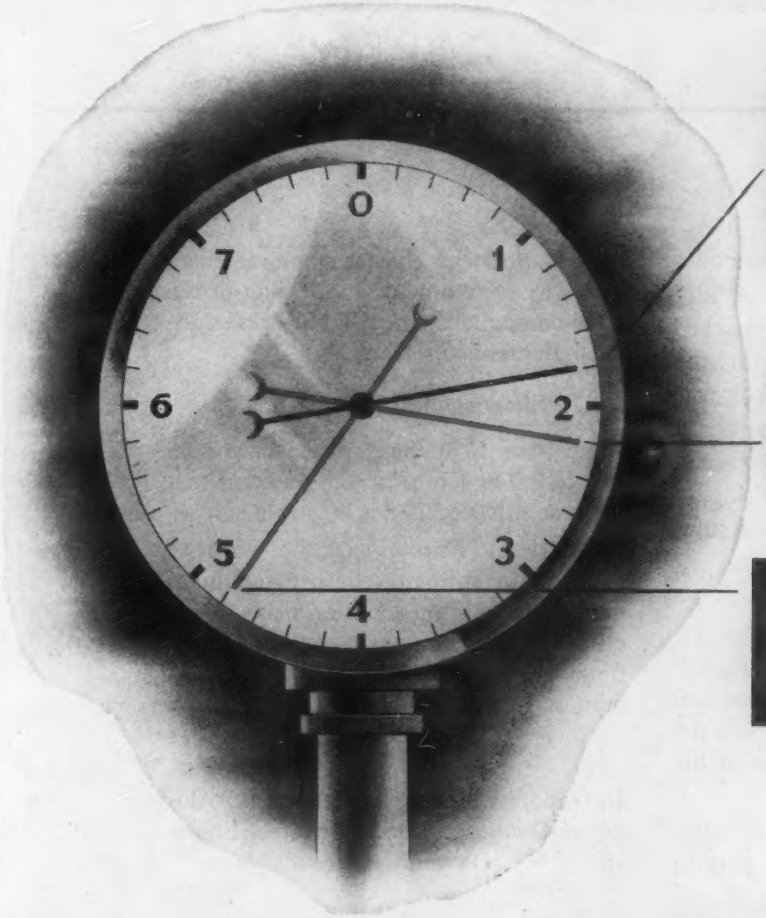
INGOT • SHEET • SHAPES • WIRE • ROD • TUBING • FORGINGS • CASTINGS • PARTS • FOIL • POWDER

CUT DEADWEIGHT

FROM YOUR COACH PARTITIONS AND DOORS

REDUCE MAN HOURS
CUT FINISHING COSTS
MAKE QUIETER PARTITIONS

CHECK THESE FACTS ON
PLYMETL, HOLLOW STEEL AND HOLLOW ALUMINUM



PLYMETL
1.8 lbs. per square ft.

HOLLOW ALUMINUM
2.2 lbs. per square ft.

HOLLOW STEEL
4.8 lbs. per square ft.

HASKELITE

PLYMETL

HASKELITE MANUFACTURING CORPORATION
Department RR-2
Grand Rapids 2, Michigan

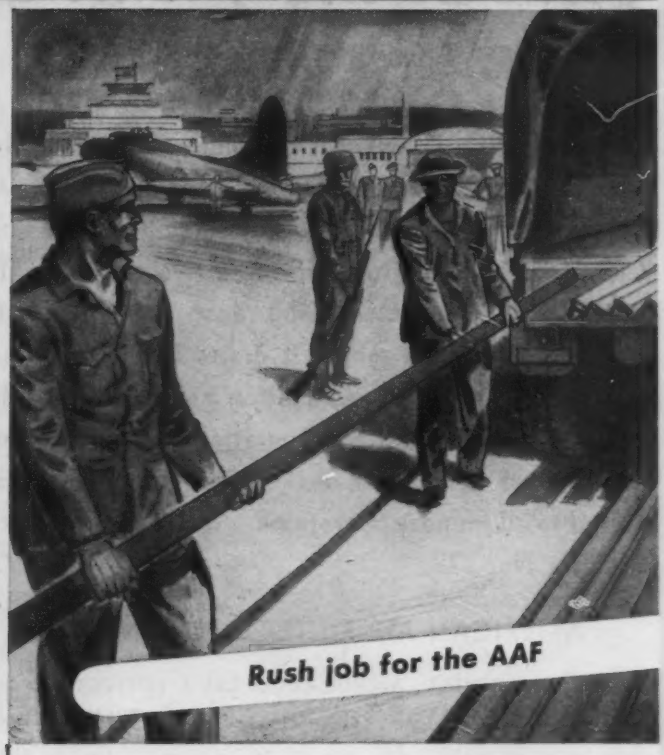
NEW YORK . CHICAGO DETROIT ST. LOUIS CANADA: RAILWAY & POWER ENGINEERING CORP., LTD.

We're on the job... DAY AND NIGHT!

Repairs speeded at vital iron mine

At 11:30 one Saturday night, our Twin City manager received an urgent call at his home. An alloy steel shaft was needed to repair a breakdown that was delaying operations at an important iron mine.

Our men got on the job and got the steel ready. The mine sent a truck to our warehouse at 4:30 A.M. to pick it up—getting back to the mine at 8:00 A.M. Another example of the teamwork that makes our service to customers so outstanding.



Rush job for the AAF

At noon, one Saturday in September, 1944, a call came to our St. Louis warehouse from an Army Air Field. Could we cut some 18,000 lbs. of steel angles into 20-foot lengths and load them onto an Army truck at 8:00 A.M. Sunday? We could and we did—meeting an important emergency.

NEED STEEL? *Call us...*

UNITED STATES STEEL SUPPLY COMPANY
USS
STEELS
SERVICE

Stocks in our warehouses today are larger and there is a wide variety of steels available for quick shipment. If you need steel, steel products, tools, equipment or machinery, phone, write or wire our nearest warehouse. The chances are that we have what you want, so a call to us may solve your problem—avoid serious delays to vital war production. Our stocks include the National Emergency Alloy Steels which have proved so satisfactory for many applications. Your orders or inquiries will receive careful, courteous attention and immediate action.

UNITED STATES STEEL SUPPLY COMPANY

CHICAGO (90),	1319 Wabansia Ave., P. O. Box MM	BRUnswick 20
BALTIMORE (3),	Bush & Wicomico Sts., P. O. Box 2036	GILmore 31
BOSTON (34),	176 Lincoln St., Allston, P. O. Box 42	STAdium 94
CLEVELAND (14),	1394 E. 39th St.,	HEnderson 57
MILWAUKEE (1),	4027 West Scott St., P. O. Box 2045	Mitchell 75
NEWARK (1), N. J.	Foot of Bessemer St., P. O., Box 479	Bigelow 3-59
		REctor 2-6560 • BErgen 3-16
PITTSBURGH (12),	1281 Reedsdale St., N. S.	CEdar 77
ST. LOUIS (3),	21st & Gratiot Sts., P. O. Box 27	MAin 52
TWIN CITY,	2545 University Ave., St. Paul (4), Minn.	NEstor 28

UNITED STATES STEEL

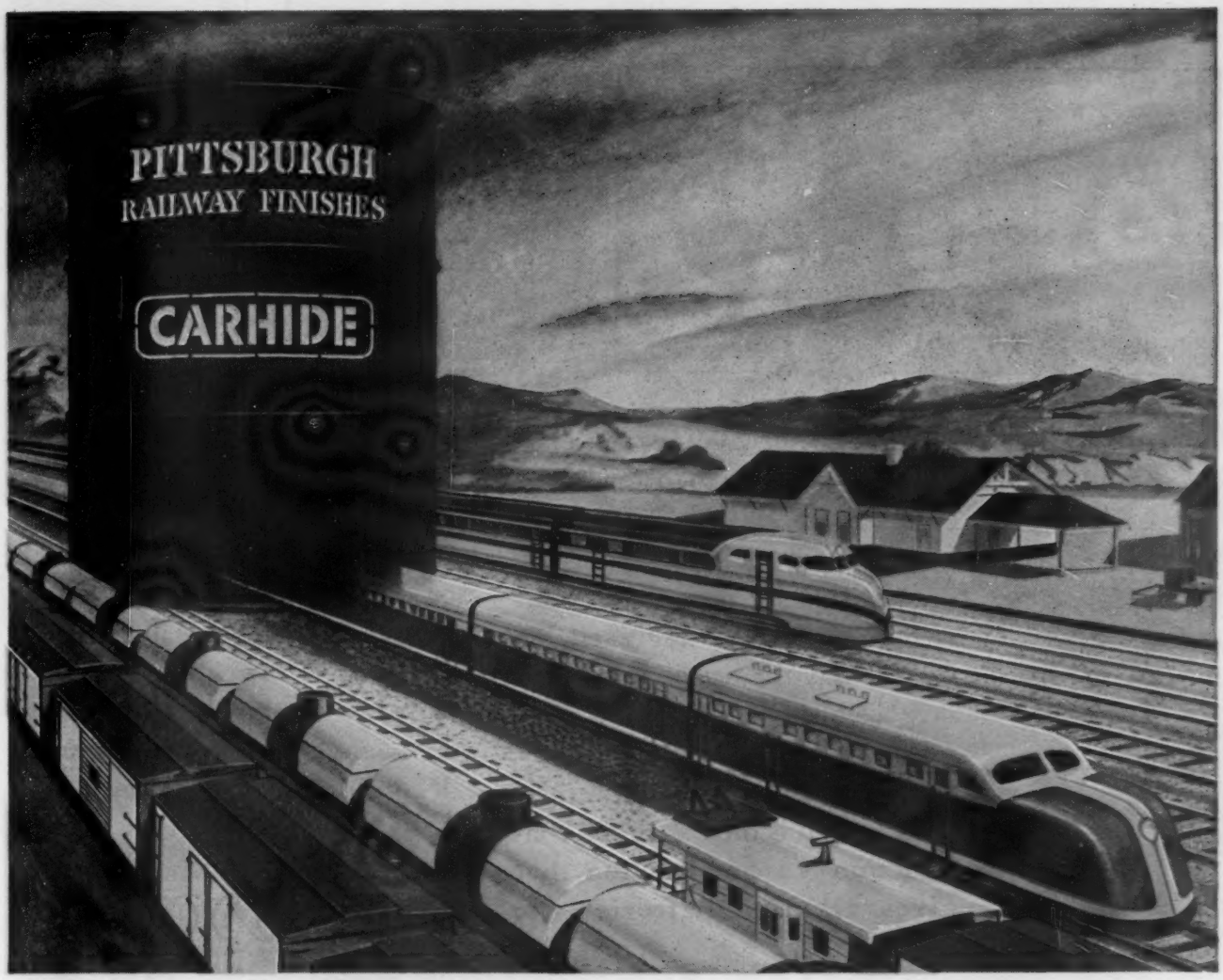
HOW TO CONTROL DUST *from Swing Frame Grinders* WITH ROTO-CLONE . . . .

THIS RAILROAD SHOP is no longer laden with dust from swing frame grinders. The clean floors and equipment you see stay that way since a Type D Roto-Clone was installed to serve these two grinders. The Roto-Clone removes *all* the dust because of the large volume of air which it draws into and through the booths. Ease of installation at or near the dust source, and its positive operation under the most severe dust conditions, makes Roto-Clone especially suited to all foundry operations. Write for descriptive Bulletin No. 272.

In the installation shown here, the Roto-Clone is located on the storage bay on the floor above the grinding booths. The dust is pulled into the booths and up by the Roto-Clone and precipitated into the storage hopper at its base. The cleaned air is vented to the roof.

AMERICAN AIR FILTER COMPANY, INC.
Incorporated
111 CENTRAL AVENUE, LOUISVILLE 8, KENTUCKY
IN CANADA: DARLING BROTHERS, LTD., MONTREAL, P. Q.

Roto-Clones are available in two types—for either dry or wet collection. Descriptive bulletins covering their application to all foundry dust problems are available on request.



Railroads, too, know the *sales value* of COLOR

THERE'S something about a sleek streamliner, resplendent in gay colors, that seems to tell a travel-conscious public—"I'm *your* kind of transportation . . . modern as the World of Tomorrow!"

A look across the tracks shows what a beauty treatment can do for even the ordinary freight car. In bright, cheerful colors it becomes an eye-arresting advertisement that builds valuable prestige all along the line.

Today, of course, lengthy layups in the paint shop cannot be tolerated. But, by using Pittsburgh Railway Finishes, it is possible to re-paint rolling stock in color almost overnight! For instance, with Pittsburgh Carhide, freight cars can be re-finished completely in twenty-four hours, ready for stenciling after overnight drying.

Live-Paint Protection!

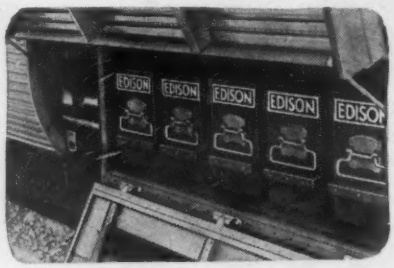
Many Pittsburgh Railway Finishes are enriched with exclusive *"Vitolized Oils"* which remain in the paint film long after application—keep it *live,* tough and elastic. In addition, Pittsburgh's famous *molecular-selection* process improves on "Nature's best" by producing a brand new oil which vastly improves drying and assures uniformity of paint performance.

PITTSBURGH RAILWAY FINISHES, available for a wide variety of applications, include Carhide for all types of freight equipment, Stationhide for stations, Ironhide for bridges, and Lavax Synthetic Finishes for passenger cars and locomotives. Call on us for expert advisory service. Our extensive experience in the field can often save you time and money.

PITTSBURGH PLATE GLASS CO.
Industrial Paint Division, Pittsburgh 22, Pa.
Factories: Milwaukee, Wis.; Newark, N. J.; Houston, Tex.; Los Angeles, Cal.; Portland, Ore. Ditzler Color Division, Detroit, Mich. The Thresher Varnish Co., Dayton, O.

PITTSBURGH PAINTS
PITTSBURGH PLATE GLASS COMPANY, PITTSBURGH, PA.
RAILWAY FINISHES

PITTSBURGH STANDS FOR QUALITY PAINT AND GLASS



They Save Weight *where it counts most*

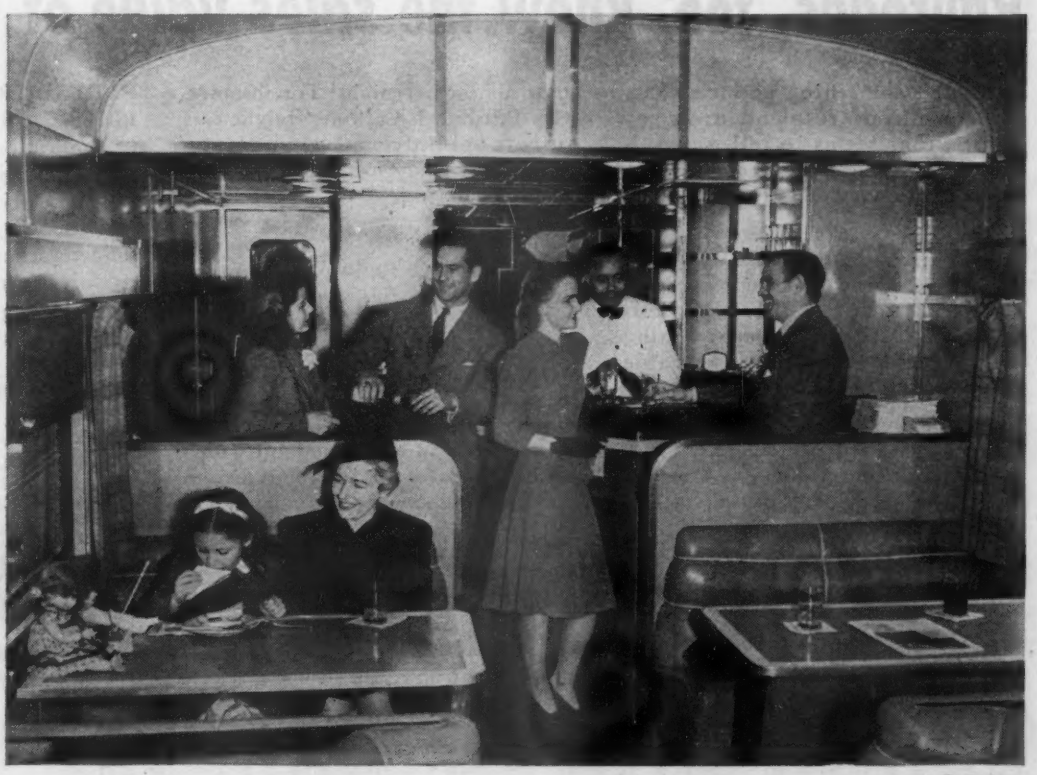
Use of Edison Alkaline Batteries is a proved way to provide the necessary standby power capacity with the least weight.

Not only are they the lightest weight type of battery available for railway-car service but they save weight where it counts most —near the middle of the car.

An outstanding reason for their light weight is their steel cell construction — a construction that gives alkaline batteries the further advantage of unequalled mechanical strength.

Alkaline batteries are equally suitable for use in 32-volt, 64-volt or 110-volt systems. They have been giving dependable service for many years in all three. *Edison Storage Battery Division of Thomas A. Edison, Incorporated, West Orange, New Jersey.*

Edison
THE LIGHTWEIGHT BATTERY
FOR LIGHTWEIGHT CARS



Ⓔ 7245

FOR HARDENABILITY—

No Other Material Can Equal ALLOY STEELS

Hardenability—one of the most important qualities of steel—reaches the ultimate in alloy steels. No other material can be softened for working and hardened to resist wear to the high degree attained in alloy steels.

With alloy steels, you can increase depth of hardening. You can harden with greater ease and assurance of uniform results. You can definitely help insure against non-hardened areas or soft spots in wearing surfaces.

And in heat after heat of alloy steels, the physical attributes are repeated faithfully time after time—providing a margin of properties found in no other material. In other words, uniformity of physical properties is greatest in alloy steels.

When you have a problem involving hardenability—or high strength to weight ratio; resistance to wear, strain, shock, fatigue, heat, cold or corrosion; or any other specification, consult Republic metallurgists.

Their unequalled experience in the production and fabrication of alloy steels is yours to help you achieve greater safety and economy in severe service.

REPUBLIC STEEL CORPORATION
Alloy Steel Division
Sales Offices • Massillon, Ohio
GENERAL OFFICES • • CLEVELAND 1, OHIO
Berger Manufacturing Division • Culvert Division
Niles Steel Products Division • Steel and Tubes Division
Union Drawn Steel Division • Truscon Steel Company
Export Department: Chrysler Bldg., New York 17, N. Y.

Republic
ALLOY STEELS

Also Sheets—Plates—Pipe—Ups[illegible] Bolts, Nuts and Rivets—Electrunite Boiler Tubes

Distribution of

PULLMAN-STANDARD'S 1944 SALES DOLLAR

As stewards and trustees of wartime industrial operations of national importance, and of traditions and policies affecting human welfare, Pullman-Standard is deeply conscious of its responsibility to the American public. For public information, therefore, we publish this report of our distribution of sales income during 1944—our fourth year as an arsenal of war.*

OUR record shows that armaments and implements of war produced in 1944 amounted to 78% of our total output, while vital war transportation equipment, equally important, made up the remainder.

The record has likewise been one of increasing plant efficiency . . . of new discoveries in the technique of armament building . . . and of economies which have returned to the government huge savings against budgeted cost.

It is a record in the tradition of Pullman-Standard's 85 years of industrial accomplishment and leadership—a record typical of the American system of free enterprise.

The future of American industry will depend largely upon the resourcefulness and foresight of management in bridging the gap between all-out production for war and the development of capacity volume on goods for peacetime markets. In planning ahead—in blueprinting our reconversion program—we have not only helped to visualize a future of postwar employment for essential war workers and returning veterans, but we believe we are performing a service to our national economy.

Pullman-

CHICAGO • NEW YORK

For each of the classifications of expenditure made by the company this year, the number of cents out of each dollar received is shown below

Profit subject to possible decrease through mandatory revision of prices by reason of the Renegotiation Act, and subject further to the ultimate liquidation of Inventories without loss upon general termination of War Contracts and expense of getting back into Commercial Work when the war is over	$ .0181
Taxes paid to Federal, State and Local Governments...excluding taxes withheld from employes' pay and turned over to the Government	.0936
Salaries and Expense of general offices (exclusive of compensation paid to officers)	.0108
Factory Employe payrolls	.3880
Supplies, Power, Fuel, Repairs and other expenses of operating our factories	.0632
Suppliers of Materials entering into our product	.4141
Compensation of Officers of the Company	.0021
To provide funds for replacement of factory buildings and equipment due to wear and tear and obsolescence	.0101
Total	$1.00

1 81/100 CENTS

9 36/100 CENTS

1 8/100 CENTS

38 80/100 CENTS

6 32/100 CENTS

41 41/100 CENTS

21/100 CENTS

1 1/100 CENTS

These figures summarize the results of operations which benefit the national economy, help to maintain employment in communities from coast to coast, and provide the finished tools of war for American fighting fronts. 22,216 technicians and workers in the nation-wide Pullman-Standard organization, backed by company management and facilities, contributed to all-out production for victory. The savings of 34,461 individual investors made possible this united war effort, including the financing of more than 80% (at replacement value cost) of plant facilities and machinery.

**The figures shown are based upon our actual disbursements for the first nine months and an estimate for the remaining three months of 1944.*

Standard CAR MANUFACTURING COMPANY

CLEVELAND • WASHINGTON, D. C. • PITTSBURGH • BALTIMORE • BIRMINGHAM • WORCESTER, MASS.

San Francisco Sales Representative, Mark Noble

Now that the war is over
THIS CAN BE A PICTURE OF YOU!
EGYPT: The glamour of that ancient land is unchanged! The same glorious sunshine bathes the Pyramids, the wonder of the world for thousands of years. The treasures of the Pharaohs are there for you to see. It is you who can wander along the mysterious Nile, the Father of Rivers, and watch tall sails drift by, just as they have for thousands of years. It is you who can take your ease on the terrace of your luxurious modern hotel and watch the bewildering pageant of the East. Romance is there. Egypt, the Eternal Enchantress, is unchanged . . .
Yes, now that the war is over you can visit Egypt—or, for that matter, the whole glamorous Mediterranean, from majestic Gibraltar to Suez—and even farther East, if your heart desires.
Swift, new AMERICAN EXPORT LINES vessels ply regularly between New York and the ports of southern Europe, North Africa, Palestine and India. Come aboard and let your dreams of a sea trip come true! Every comfort is yours — every wish is anticipated on an AMERICAN EXPORT vessel. And the best surprise is how inexpensively you can have such a memorable voyage.
Any travel agency will be glad to plan your trip, or write to
AMERICAN EXPORT LINES

(This advertisement prepared especially for this campaign in co-operation with N. W. Ayer & Son, Inc.)

How about Your postwar travel ads?

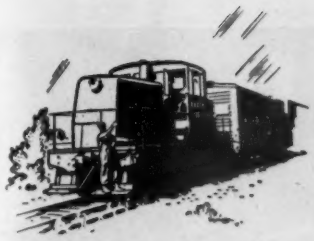
Maybe you are not actually *writing* your postwar advertisements yet—but, if you're like most travel advertisers, you're *thinking* awfully hard these days about what you'll be saying to your market as soon as the sea lanes, air lanes and railways are open to unrationed travel again.

Whatever you decide to say in your postwar advertising, the readers of TIME would seem to be your natural, most responsive audience. They are America's most traveled million—and now, as always, they are thinking of far places and how to get there.*

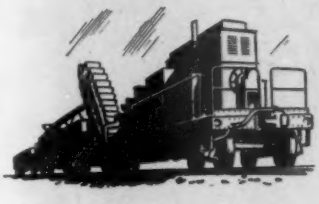
TIME families have more to spend on travel, go in for longer cruises, buy better accommodations *wherever* they go. So nine out of the last ten years TIME has carried more pages of Travel, Resort and Hotel advertising than any other magazine.

THE WAY TO REACH AMERICA'S MOST TRAVELED MILLION

*For instance, a very recent survey shows that 237,000 TIME families are planning to visit the Mediterranean someday (and 41,000 of them plan to sail there within five years after the war).



The Cummins Diesel's simple design and rugged construction are reflected in its ease of maintenance and long life—two important reasons why so many builders and operators of locomotives are specifying Cummins Dependable Diesel power.



Cummins Diesel-powered construction and maintenance-of-way equipment, such as locomotive cranes, shovels and modern ballast cars, is playing a vital behind-the-scenes role in handling today's record volume of rail traffic. In this service, the 24-hour-a-day dependability of Cummins Diesel power is paying dividends in time and money saved.

The Cummins Diesel's compact design and higher horsepower output per pound . . . its fuel economy . . . and its superior flexibility . . . explain why Cummins Diesels provide motive power for so many motor trains . . . auxiliary power for numerous streamlined passenger trains.

CUMMINS DEPENDABLE DIESELS

Industrial Models: Portable and stationary engines, power units, and generating sets for service in any industry requiring heavy-duty power.

★ ★ ★

Automotive Models: Designed for all types of heavy-duty trucks in either highway or off-the-highway service.

★ ★ ★

Marine Models: Propulsion engines and marine type generating sets designed for all types of fishing boats, work boats, and pleasure craft.

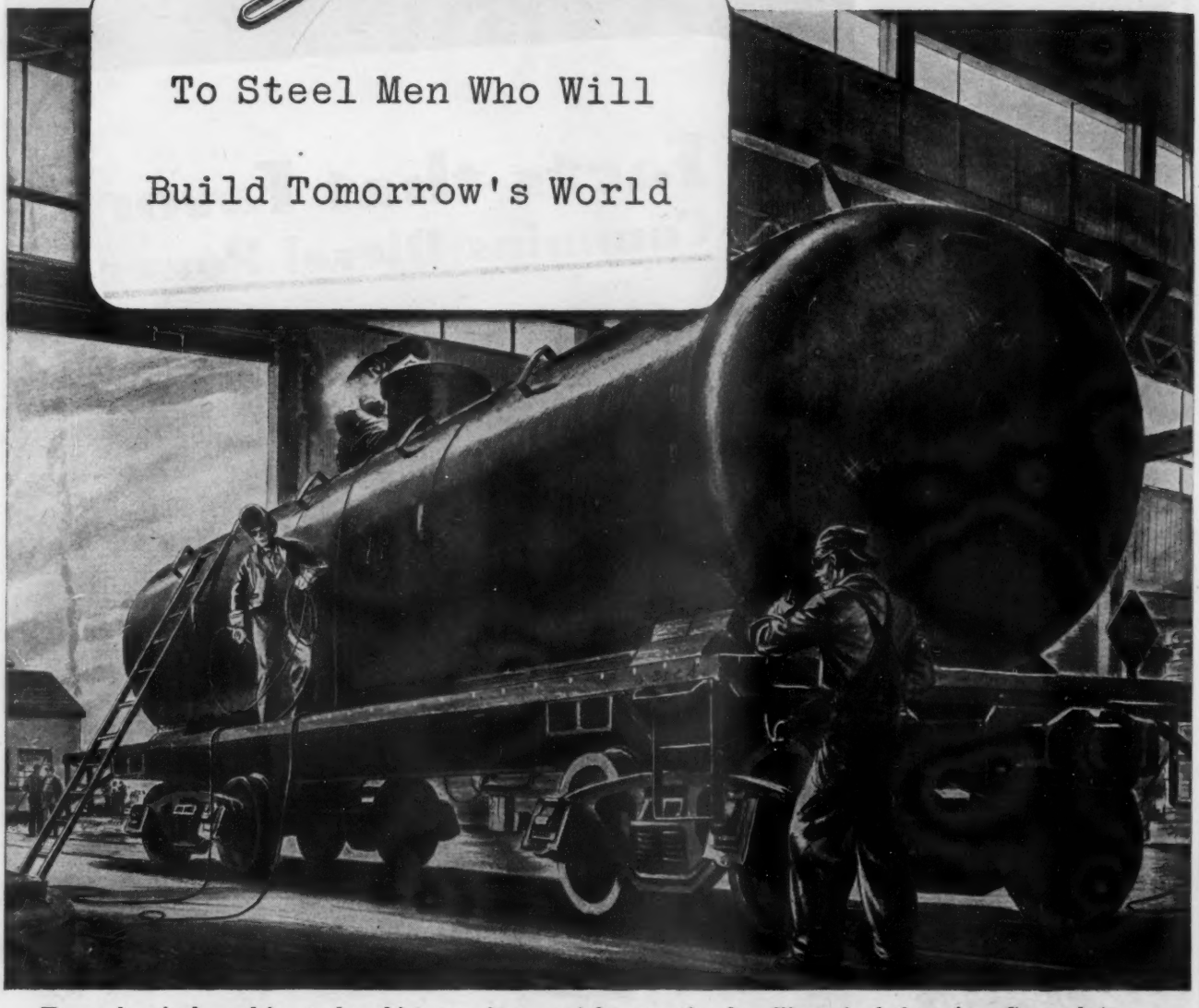
Facts that Favor Cummins Diesel Power

When you specify Cummins Diesel power for the equipment you build or operate, you are specifying a diesel that is the product of a company whose entire 26 years of existence has been devoted to the manufacture of diesel engines *exclusively*.

You are specifying a diesel whose long record of proved performance covers all types of automotive, industrial and marine applications . . . a diesel whose performance on the *tough* jobs has led more than 132 leading manufacturers to offer it as original equipment . . . a diesel whose efficient operation and long life is made doubly certain by the backing of a nation-wide service organization. CUMMINS ENGINE COMPANY, INC., Columbus, Indiana.

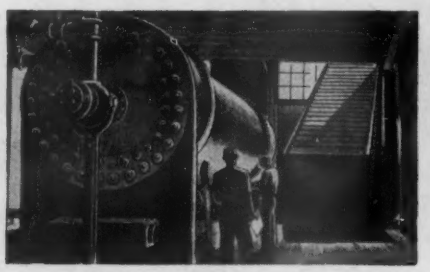
To Steel Men Who Will

Build Tomorrow's World



Every chemical used in steel-making requires special protective handling. And there is a General American tank car specially designed, lined, or insulated to give *every* chemical safe, economical transportation.

Benzol and other liquids, important to the steel industry, are guarded against contamination at General American's strategically located storage terminals.



Process Equipment, developed by our research engineers and built by General American, produces profitable by-products for many steel mills from waste materials.

Pressure vessels from General American Plate & Welding Division are built for big jobs—fabricated with skill proven in war and peace.

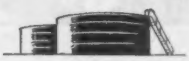
GENERAL AMERICAN TRANSPORTATION

CORPORATION

Chicago

GATX GENERAL AMERICAN

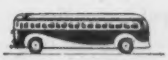
Builders and Operators of Specialized Railroad Freight Cars



Bulk Liquid Storage Terminals

Process Equipment of All Kinds

Pressure Vessels and Other Welded Equipment



Aerocoach Motor Coaches

Precooling Service for Fruits and Vegetables

Tomorrow's POWER Today!

It's the
Opposed-Piston
Diesel Locomotive
by

FAIRBANKS-MORSE

A name worth remembering

Even Steel Must Wear Armor...

Against biting, cinder-laden wind . . . slow, seeping moisture . . . even steel must wear Armor.

Every Railway Engineer knows what it is to face especially difficult maintenance problems involving steel structures.

Corrosive gases from locomotive blast . . . cinder abrasion . . . seeping water forming acid solutions . . . these are only a few of the conditions that make effective protection so highly important.

For more than 40 years, The Flintkote Company has pioneered in the development of Industrial Asphalt products for metal protection . . . armor against corrosion. Special emphasis has been placed on railway requirements.

Complete metal protection with Flintkote Protective Coatings offers triple economy. Material cost is comparatively low. Application is fast and simple. Long years of effective protection cut recurrent maintenance costs.

FLINTKOTE
INDUSTRIAL PRODUCTS

The Flintkote Company . . . Industrial Products Division . . . 30 Rockefeller Plaza, New York 20, N. Y.

ATLANTA • BOSTON • CHICAGO HEIGHTS • DETROIT • LOS ANGELES • NEW ORLEANS • WACO • WASHINGTON • TORONTO • MONTREAL

Another Reason why PSF is CASTING HEADQUARTERS to Steel Producers

This blast furnace goggle valve is just one more of the long and complete list of mill equipment castings that PSF furnishes—not only to practically all of the industry's plants in this country, but to Allied Nations as well. There's long and valuable experience behind these castings, but even more important, they're the product of the most advanced foundry practice, testing methods and machining facilities. That means dependably, uniformly high *quality*—the first assurance you want in any casting purchase.

WAD 9599

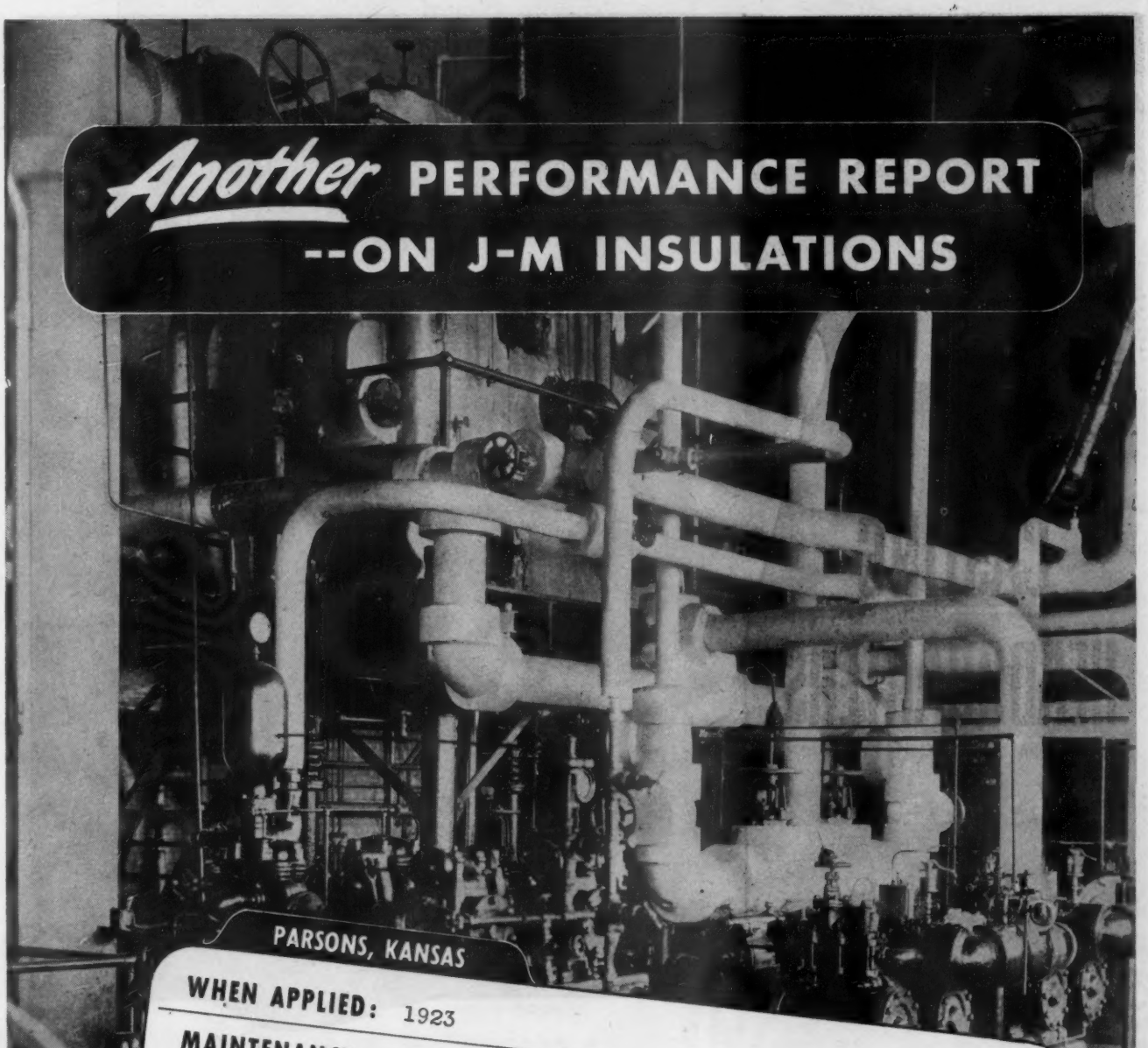
46 YEARS OF STEEL CASTING KNOWLEDGE

Pittsburgh

STEEL FOUNDRY CORPORATION

GLASSPORT, PA.

Sales Offices: NEW YORK • PHILADELPHIA • WASHINGTON AND CHICAGO



Another PERFORMANCE REPORT --ON J-M INSULATIONS

PARSONS, KANSAS

WHEN APPLIED: 1923

MAINTENANCE: Less than $10 average yearly

PRESENT CONDITION: Excellent -- no loss in thermal efficiency

REMARKS: In the power plant of the M. K. & T. R.R. at Parsons, Kansas, there are five Sterling 518 h.p. boilers, turning out approximately 30,600,000 lbs. of steam per month. The installation in 1923 included: 1780 lineal feet of J-M Asbesto-Sponge Felted in various thicknesses and diameters; 300 sq. ft. of J-M 85% Magnesia for covering feedwater heaters; and 3400 lbs. of J-M Asbestos Plastic Cement for pipe fittings and boilers. Considering the size of the installation, maintenance has been negligible -- approximately $200 in 21 years, or less than $10 average per year.

JOHNS-MANVILLE JM PRODUCTS

Johns-Manville

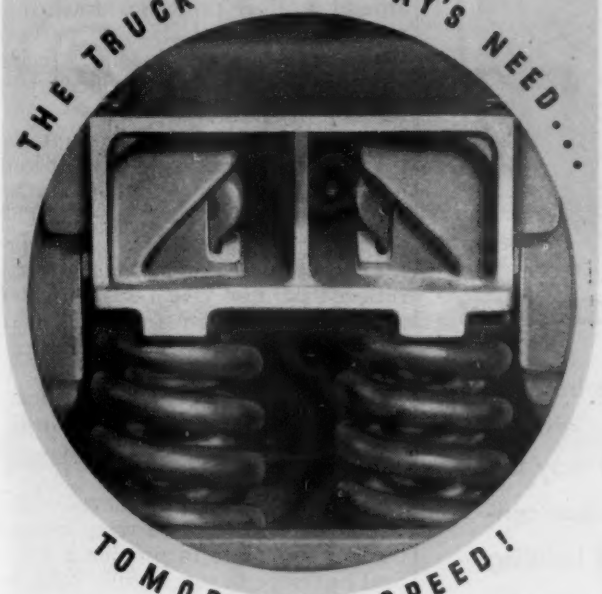
87 YEARS OF SERVICE TO TRANSPORTATION

Insulations • Packings • Friction Materials Refractory Cements • Building Materials

IT'S ALWAYS WISE TO STANDARDIZE . . .

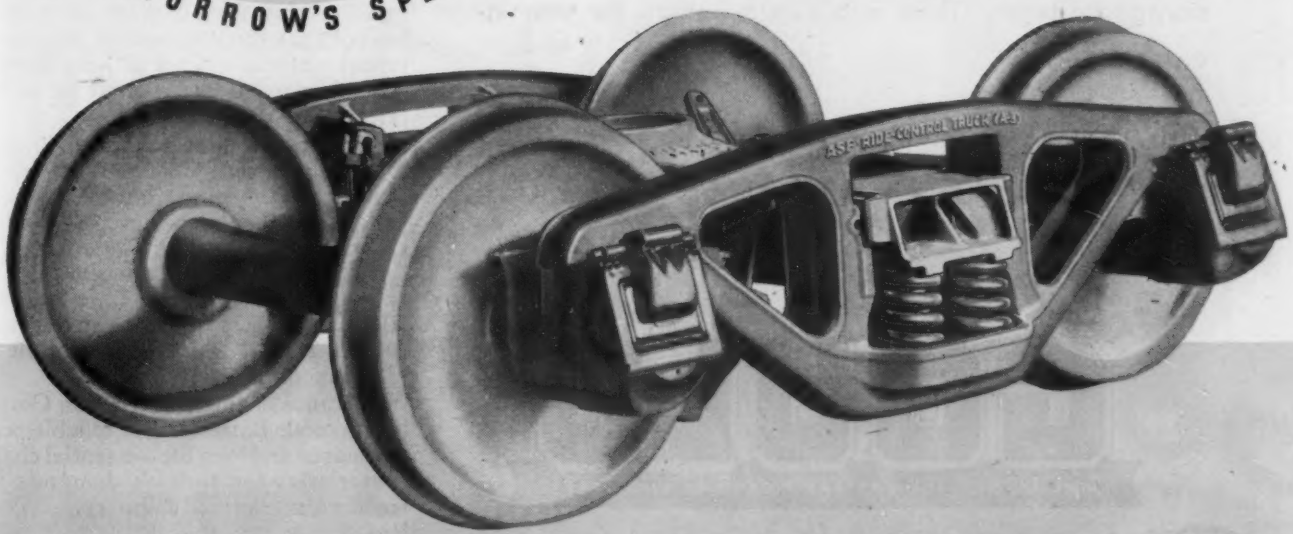
Ride-Control

for <u>All</u> Freight Cars !



American Steel Foundries recommends the Ride-Control Truck (A-3) for *all* freight cars, a recommendation that is based on more than four decades of experience in designing, developing, manufacturing, and selling freight-car trucks and parts. This truck is offered for use with coil springs of whatever travel best suits the various types of service for which freight cars are intended. Making it easier for the railroads that anticipate the future use of longer-travel springs, this truck can be arranged for use with shorter-travel springs initially. These can later be replaced by longer-travel springs if the cars are required for higher-speed service or if an A. A. R. standard spring having a still different travel should be developed.

NO SPRING PLATES • NO SPRING PLANKS



AMERICAN STEEL FOUNDRIES

CHICAGO

MINT—MARK OF FINE CAST STEEL

ENERGY RATINGS ARE VITAL

Man's energy rating is determined by the basal metabolism test for energy output. A man cannot do efficient work beyond his energy rating.

IN A CARLIGHTING BATTERY

energy ratings are equally vital.

GLASSKLAD *since 1925*

There are many factors to consider in the selection of a storage battery. Energy demands are of prime importance but equally so is the life expectancy of the battery.

No matter what your storage battery requirement may be, Gould is in a position to offer you the benefit of its half century of experience in designing, developing, and building storage batteries. There is a Gould Battery for your individual need.

Write Dept. 52 for Catalog 800 on Gould Kathanode Glassklad Batteries for Carlighting and Air-Conditioning Service.

GOULD

Since 1898 . . . THE BATTERY PICKED BY ENGINEERS

THE KATHANODE POSITIVE UNIT

One of a series of informative articles for users of industrial batteries.

In 1925 Gould bought the license rights from the D. P. Battery Company of London to manufacture batteries with the glass retainer principle. D. P.'s original patent covered only the wrapping of glass wool, as it was then called, around the positive plate. The pressure of the wood separators against the glass was practically the only support. Gould engineers quickly foresaw the possibilities inherent in the fundamental principle and began research seeking further improvements.

First Gould found an American manufacturer who helped develop a "spun glass," which was later made into a mat replacing the glass wrap-around retainer principle. Each mat was cut sharp and clean to prevent fraying of fibers and possible treeing and was made up of 12 stratified layers totaling .05 inches.

Gould Black Oxide active material with cores of pure lead giving it long life and great power producing characteristics was next developed. This required an equally long-lived separator so research was started on a rubber separator, which was perfected and named Durapor. In keeping with these improvements the positive grid was redesigned to give equal life. It was made up of wedge-shaped boxes with round members imbedded in the active material, a feature exclusive with Gould.

Gould engineers next developed a porous rubber sheet to wrap around the positive plate to provide a Unit-Seal Envelope to successfully hold the glass retainer mats in place. It is open at both the top and bottom to permit spent material to filter to the sediment chamber and is 60% porous for rapid electrolyte diffusion.

Briefly summarizing, the well-known "Gould Kathanode Positive Unit" consists of the sturdy antimonial lead grid; then the "high powered" Gould Black Oxide active material; next a spun glass mat on each side of the plate; and surrounding the plate the Gould Unit-Seal Envelope holding the entire assembly into the complete Kathanode Positive Unit.

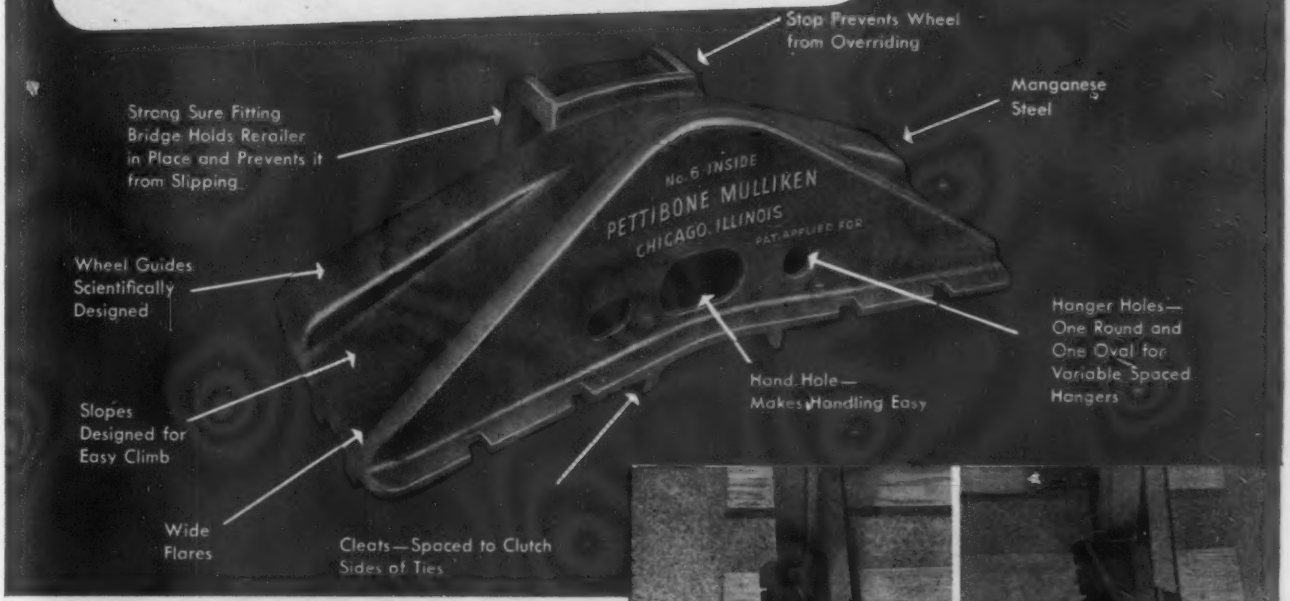
Because of this construction Gould Kathanode Batteries give reliable performance and long life—essential characteristics for today's demands in modern accelerated industry.

For Excellence in storage battery production at Depew plant

GOULD STORAGE BATTERY CORPORATION, Depew, New York

Pettibone Mulliken RERAILER

Saves Train Crew Time and Track Tie-Up


Stop Prevents Wheel from Overriding
Manganese Steel
Strong Sure Fitting Bridge Holds Rerailer in Place and Prevents it from Slipping
No. 6 INSIDE
PETTIBONE MULLIKEN
CHICAGO, ILLINOIS
PAT. APPLIED FOR
Wheel Guides Scientifically Designed
Hanger Holes—One Round and One Oval for Variable Spaced Hangers
Hand Hole—Makes Handling Easy
Slopes Designed for Easy Climb
Wide Flares
Cleats—Spaced to Clutch Sides of Ties

Gets 'em On— and Rolling Quicker!

Because Pettibone Mulliken Rerailers — Are easy to place — Rerail cars and locomotives faster — Eliminate makeshift, time-consuming methods — Cannot slip out of position — Can be handled by one man — they are invaluable when every minute, every man-hour is vital.

3 sizes	Rail Section	Price
No. 5 Rerailer (75 lbs. each)	For 40-55 lb. rail	$41.00 per set
No. 6 Rerailer (110 lbs. each)	For 60-90 lb. rail	43.30 per set
No. 7 Rerailer (155 lbs. each)	For 100-131 lb. rail	45.00 per set

Rugged, one-piece, manganese steel construction—scientifically designed to protect equipment in rerailing—developed by Pettibone Mulliken know-how and experience in the railway field. The time saved on the first derailment pays the original cost.

1. Gradual and Easy Climb from Ties.

2. Quickly Raises Wheels to Top of Rerailer.

3. Gently Reseats Wheels on Rails.

Established 1880

PETTIBONE MULLIKEN CORPORATION

4710 West Division Street, Chicago 51, Illinois

Dissipate THE SHOCKS!

Style A-6-A Holland *Volute* Snubber Springs

For several years now Spring Groups have been hard-pressed by the perpetual pounding of unprecedented loads and speeds. Dissipating these greatly-augmented shocks on many cars are Holland Volute Snubber Springs.

Uncle Sam Uses Volute Springs on Many Tanks

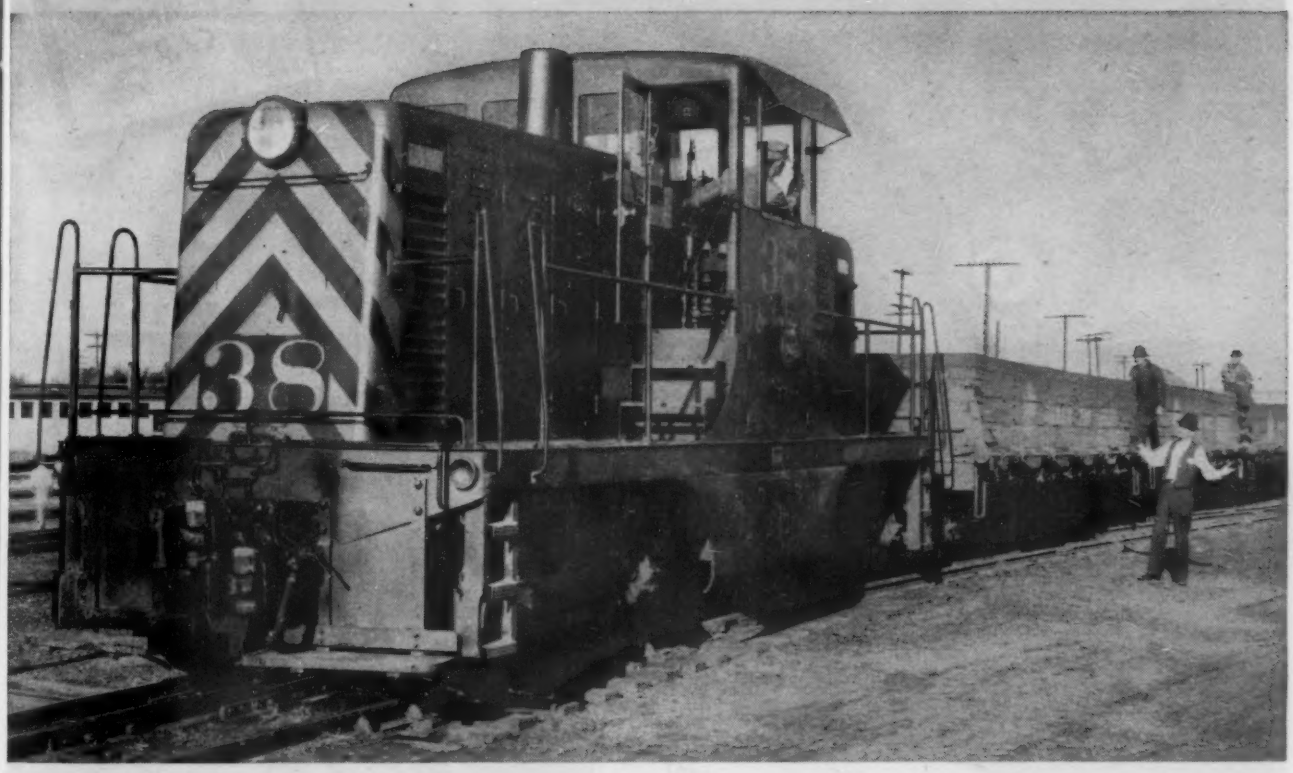
Signal Corps Photo

HOLLAND COMPANY

332 SOUTH MICHIGAN AVENUE, CHICAGO, ILLINOIS

701

"MASS O' MUSCLE"



EQUIPPED with two "Caterpillar" Diesel D17000 Engines, this compact, powerful 44-tonner handles up to 26 standard gauge cars for the Denver & Rio Grande Western at its Alamosa, Colo., yards. Works 23 hours a day — with each engine consuming only about 4 gallons of fuel per hour.

Five other locomotives of the same type testify to the D. & R.G.W. management's satisfaction with Diesel power as harnessed by "Caterpillar" engineering for dependability and low operating costs.* (The D. & R. G. W. also uses a lot of "Caterpillar"-Diesel-powered Maintenance of Way equipment — tractors, shovels, compressors, etc.)

WRITE *for further facts* about "Caterpillar" Diesels — and for list of locations where their performance in 44-tonners can be witnessed.

CATERPILLAR TRACTOR CO. • PEORIA, ILLINOIS

***HEART OF THE "CATERPILLAR" DIESEL IS ITS EFFICIENT FUEL SYSTEM**

No operating adjustments whatever.

Pre-combustion chamber of exclusive design which enables burning successfully, with clean exhaust, a wide range of fuels—including low-cost No. 3 domestic burner oil . . . provides efficient burning of fuel at all loads and speeds. (Engine can idle indefinitely without fouling or choking up, then pick up load immediately without faltering.)

Injection pumps and injection valves are interchangeable and are installed without any timing, balancing or other delicate adjustments.

Injection pumps are individually replaceable.

Absorbent filters assure positive protection against dirt and grit being carried by fuel to injection pumps and valves.

Long life—the result of correct design, precision manufacture and highest quality materials.

CATERPILLAR DIESEL ENGINES

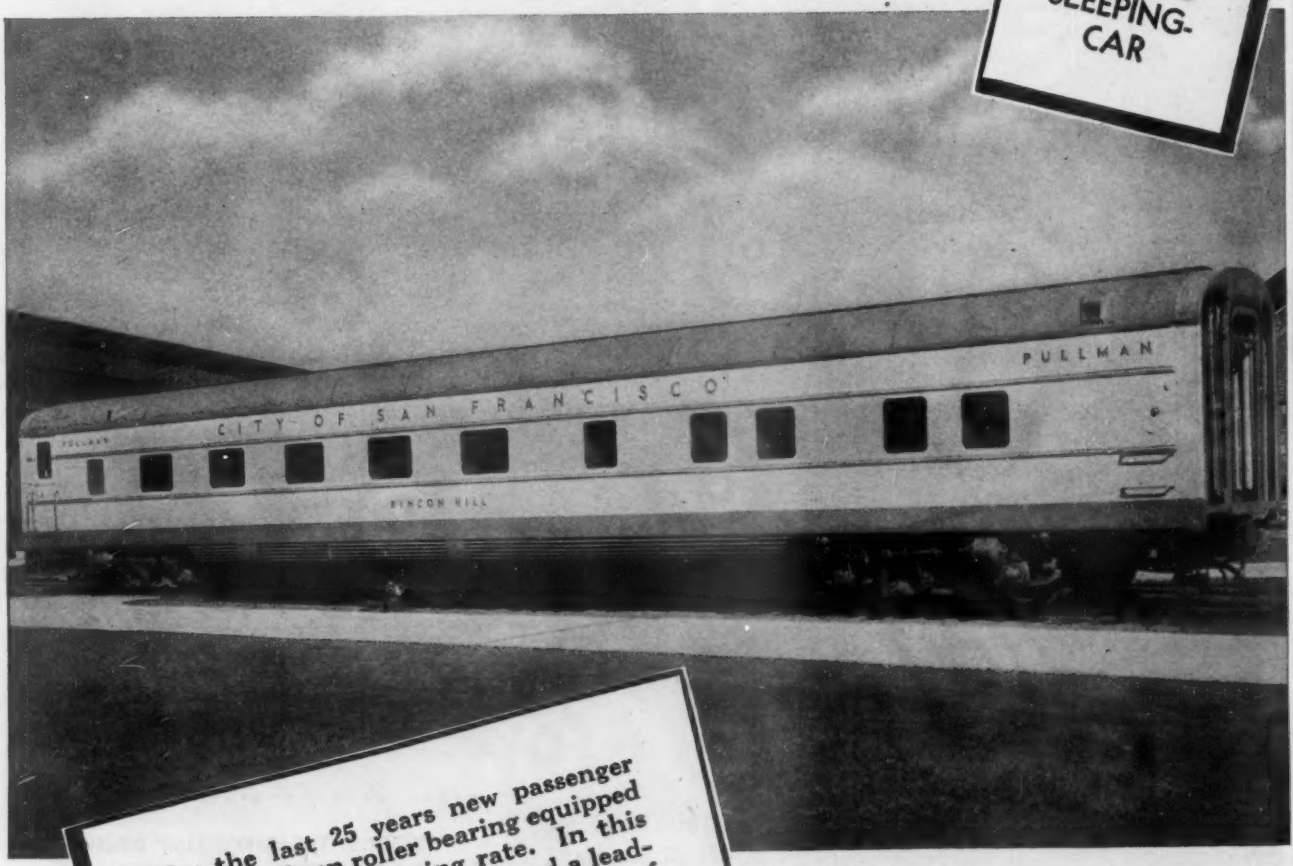
REG. U.S. PAT. OFF.

TRACTORS • MOTOR GRADERS • EARTHMOVING EQUIPMENT

PASSENGER CARS ROLL

SAFELY ON SKF's

ANOTHER SKF EQUIPPED SLEEPING-CAR



For the last 25 years new passenger cars have been roller bearing equipped at a steadily increasing rate. In this development SKF has played a leading part, thus winning a big vote of confidence from American railroads who have long emphasized the importance of safety . . . who for years have utilized the dependability, increased availability of equipment, low maintenance costs, and many other advantages of SKF Spherical Roller Bearings. In an SKF, *reliable performance* is the thing that counts. 5743

SKF INDUSTRIES, INC., PHILA. 34, PA.

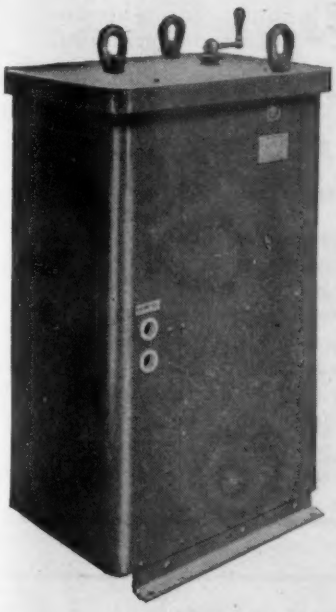
SKF

BALL AND ROLLER BEARINGS

"A-C transformer-type welders? I'd buy 'em from TRANSFORMER HEADQUARTERS!"

"Who do you mean, Steve?"

"Why, Westinghouse, of course. Any a-c welder is built around a transformer, and Westinghouse has been building all types of transformers longer than anybody else—so I'd suggest we get 'em from the outfit that's recognized as transformer headquarters."



A-c welders are essentially transformers. That's why Westinghouse A-C Welders offer the benefit of more years of experience in the designing and building of this type of equipment than any other welder . . . because Westinghouse built the first successful commercial transformers.

A-c electrodes, too, have been developed, tested and proved by Westinghouse to meet welding requirements that range from the lightest welding to the heaviest. In fact, Westinghouse A-C Welders and Electrodes provide the right combination for faster, more economical industrial welding—maintenance, fabrication or construction.

Westinghouse A-C Welders are available in a complete range of ratings from 100 to 2000 amperes. Ask for catalog B-3136 giving full details. Westinghouse Electric & Manufacturing Co., Box 868, Pittsburgh 30, Pa.

J-21315

Westinghouse

A-C WELDERS and ELECTRODES

5 NEW STUDIES *available for railroad executives' use*

Modernized systems of record control have demonstrated the far-reaching influence of this phase of operation in helping to meet future competition with improved transportation services.

The most efficient of these new techniques, used by more than 40 prominent railroads, have now been assembled in five special surveys. Originally intended for the use of our own staff, their 180 pages contain so much information of practical value to railroad men that we will gladly release them to you for study.

GENERAL STORES DEPARTMENT

Management Controller #689

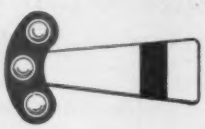
Wartime conditions have emphasized as never before the need for adequate control of the vast amount of maintenance stores required by the railroad. On a number of major systems a careful review of this phase of operations has led to the improvements revealed in this detailed study. Results reduce out-of-stock conditions, increase utilization of available materials, and speed up ordering routines.

FREIGHT AND PASSENGER TRAFFIC

Management Controller #701

Traffic Department record control that "sells" railway services—from business solicitation, through the many traffic handling phases that build public satisfaction and good will—are presented in this valuable handbook. The effective use of records in directing of freight and passenger solicitation activities is discussed, as well as information, reservation, ticket redemption and other record control requirements.

OPERATING DEPARTMENT



Management Controller #702

In Car Service, Freight Transportation, Motive Power Maintenance, Engineering and other operating departments, effectively designed record controls are helping to speed up and simplify a multitude of vitally important routines. The records illustrated and described in this Management Controller are in actual use today on Class I railroads, simplifying and speeding up routines and contributing to more efficient operations.

PERSONNEL AND PAYROLL

Management Controller #700

Railroad personnel administration records today are not simply those that satisfy the demands of good business operation. They must also provide data required for reports and proof of compliance with various government regulations and acts. This study presents some of the most effective personnel and payroll records currently in use. They have been developed by experienced operating officials in cooperation with our Systems and Methods Technicians.

ACCOUNTING AND TREASURY

Management Controller #703

Never in the history of railroading has so much importance been attached to the necessity of simplifying accounting and statistical record keeping systems. The multiplication of records, combined with the scarcity of competent clerical help, has made it vital to eliminate "frills", unnecessary details. This study shows how it is being done by practical officials of leading railroads.

SEND NOW

Railroad executives desiring to study one or more of these important surveys may obtain them on special free loan service from our nearest Branch Office. Please ask for them by name and number.

SYSTEMS DIVISION

REMINGTON RAND

Buffalo 5, New York

COPYRIGHT REMINGTON RAND INC.

CONTRIBUTES TO RELIABLE COMMUNICATION

Man's isolation under adverse conditions has ended with recent radio developments which overcome the trying conditions of air and sea transportation. This means rising above all conditions of interference. Among the things that have made this possible is Amphenol *current transmission equipment* that will carry the high frequencies without appreciable loss.

The name "Amphenol" on high frequency cables means the best of polyethylene insulated cable—cable that is sold under affidavit of exacting tests and inspections. "Amphenol" on low-loss connectors means the minimum of loss in tight fitting, secure holding connections. On both it means transmission equipment that will do its part toward providing the clearest possible transmission and reception of communications even under adverse conditions.

AMERICAN PHENOLIC CORPORATION
Chicago 50, Illinois
In Canada—Amphenol, Limited—Toronto

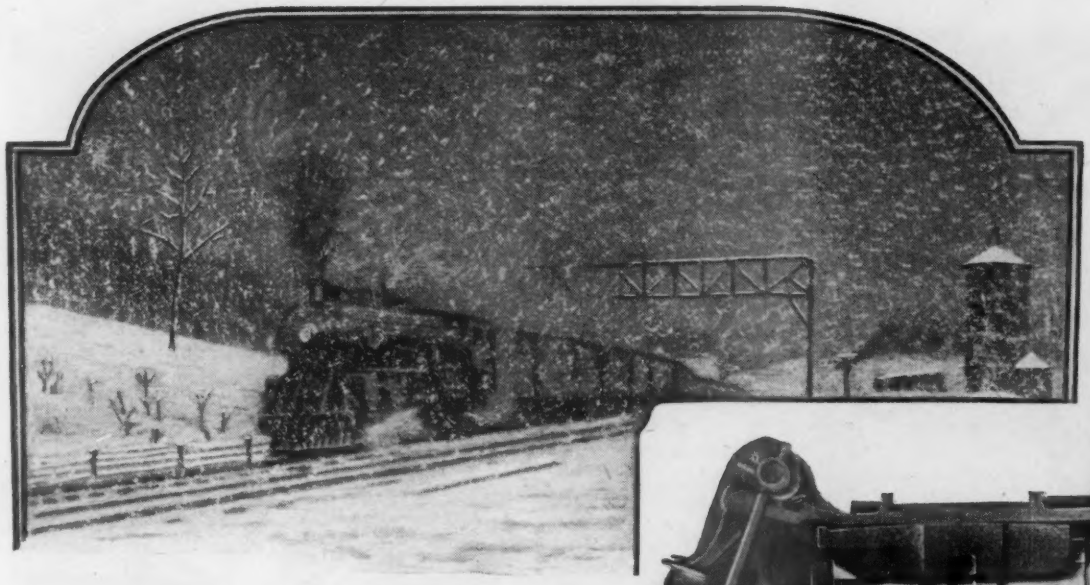
Depend upon AMPHENOL *Quality*

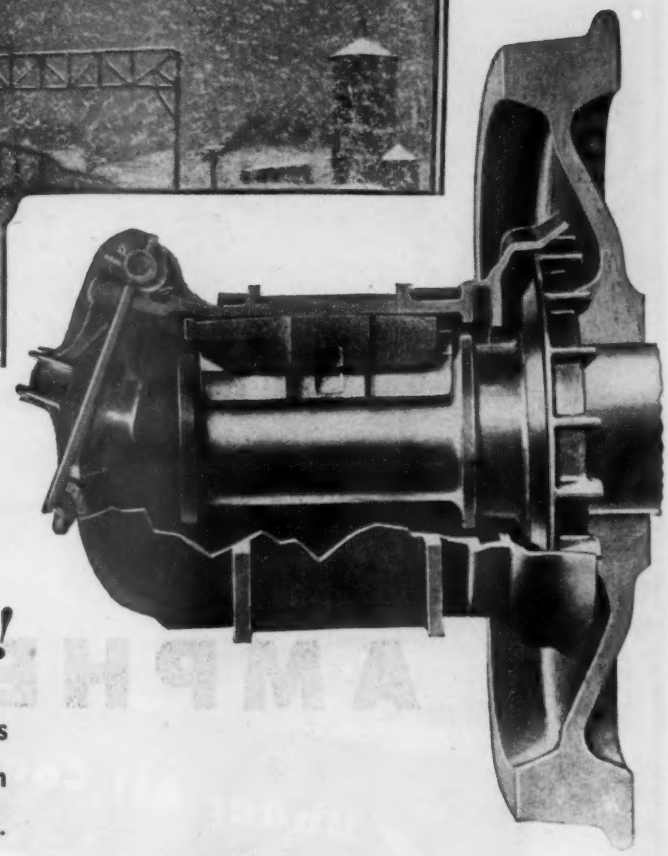
U.H.F. Cables and Connectors • Connectors (A-N, British) • Conduit • Cable Assemblies • Radio Parts • Plastics for Industry.

There is an apparent discrepancy at this point.

The pages are either missing or the pagination is incorrect.

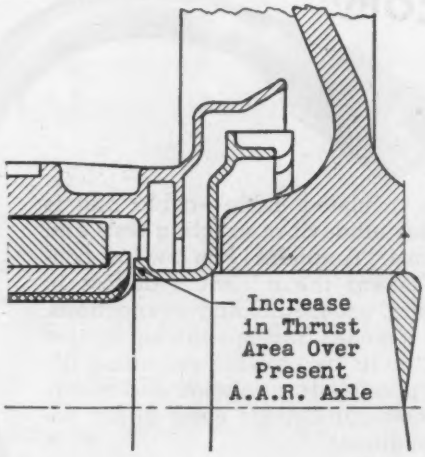
The filming is recorded as the book is found in the collections.





NO SOGGIE WASTE!

Winter offers no journal box problem when cars are equipped with National Journal Boxes with Deflecting Fans and National center bearing lids.



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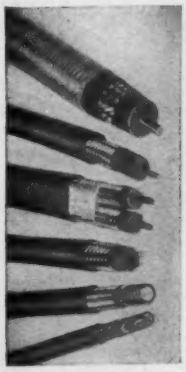

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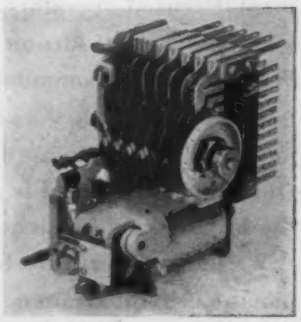

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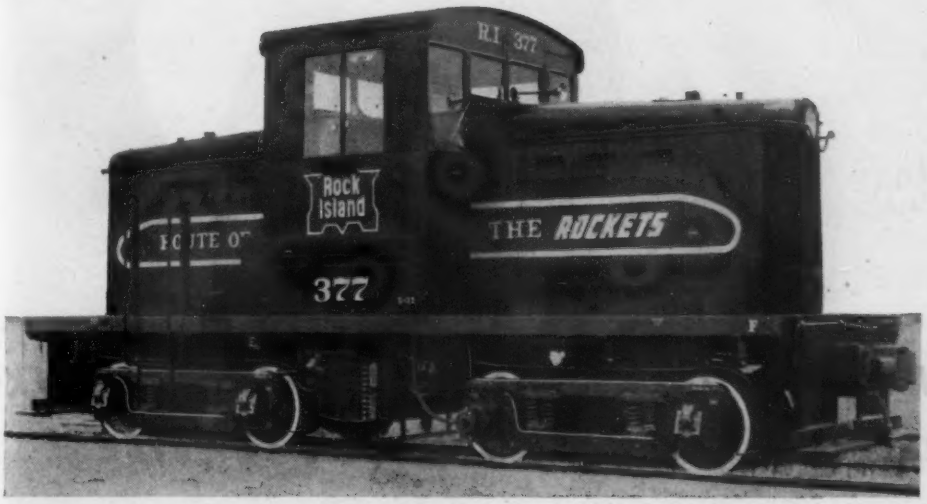

WHATEVER the future of the railroads—diligent attention to the economies must be a fundamental in the adoption of new and progressive practices. So impressive have been the service improvements and so sharp the reductions in operating costs—on many locations where Davenport 44-ton Diesel-Electric and 35-ton Diesel-Mechanical Locomotives are employed in switching and branch line service—that all forward-looking rail executives are well advised to acquaint themselves with these potent aids to railroad advancement. Since the inception "by Davenport" of the Lighter Diesel Switcher, the record is emphatic—They Quickly Pay for Themselves Through Rapid and Direct Savings.

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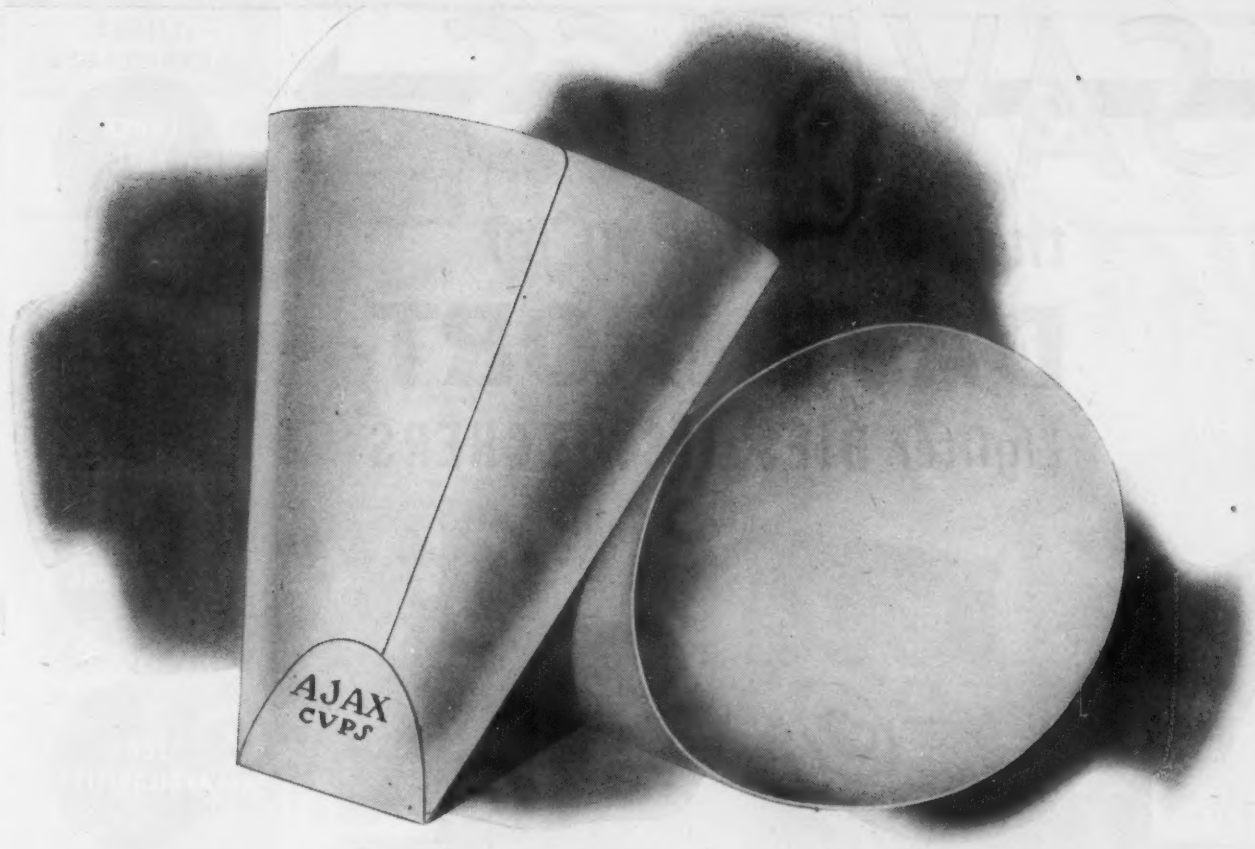

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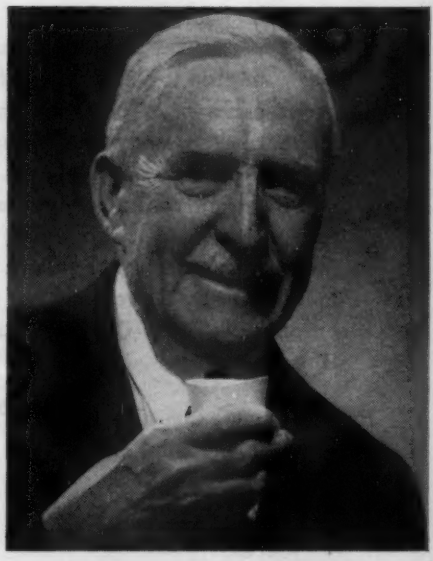

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Railway Age

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Roads Gain in Battle Against Weather 300

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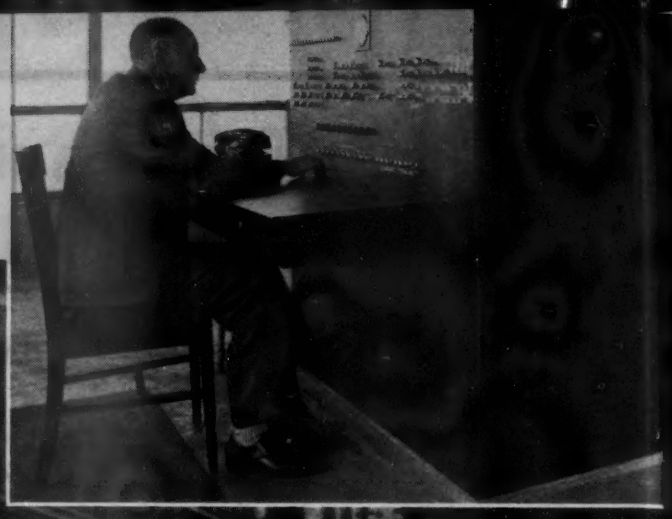
"Union"
ROUTE INTERLOCKING
when seconds count



Between 8 A.M. and 9 A.M. every business day, 138 trains operating on 90-second headway pass through the interlocking at the north portal of the new Chicago subway. A "Union" Route Interlocking at this point keeps this traffic moving smoothly. Similar interlockings are located at the south portal and at the Thirteenth Street stub.

To set up a route the operator merely pushes a button corresponding to the signal at which the train enters the plant, and another corresponding to the point of exit. Switches automatically line up as required to complete the route, which then shows on the track diagram as a continuous line of white light. The signal governing entrance to the route then clears and is separately indicated on the control machine.

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The Week at a Glance

MASQUERADER: While the so-called "Full Employment Act of 1945" (now under senatorial consideration) is being promoted as an aid to the effort that private enterprise will be bound to sustain toward providing full peace-time employment, the leading editorial this week points out that it actually is nothing of the sort. The effect of such legislation would be to reduce, not to increase, the means available to private enterprise for providing employment—both because it would require large government expenditures that must be met from taxes to which business must contribute, and because government-backed and subsidized competition would reduce the profits that business can realize. Once the ability of private enterprise to afford employment started on such a downward course, it would logically have to continue with accelerating velocity as more and more government expenditure was required, until finally government would be providing *all* employment and private capital would be providing *none*. In other words, communism would be the end product of this bill that is called a stimulant to private enterprise.

●

TO REVIVE CREDIT: People with money to invest aren't going to risk it in railroad equities as long as they see the stocks of reorganization roads classed as worthless even while they are showing substantial earning power. This conclusion has led a House committee to recommend legislation to correct what it thinks is a misinterpretation by the I. C. C. of the intent of Congress. As noted in the news pages, the "wringer" has operated, the committee feels, to destroy securities that stand for real property. Its consciousness of the necessity of restoring railroad credit to the point where stocks can be marketed to raise new capital for betterments, in order that private enterprise may meet its responsibilities, has impelled the committee to suggest new standards for the commission to follow, and to offer the courts additional opportunities to exercise independent judgment, in mapping out the capital structure of reorganized properties. No-par stock in the new companies would give the old equity holders a chance at least to recoup losses in prosperous times.

●

MINERS' METHODS: Some of the miners' union's leaders appear to be conscious of the dangers to their own welfare—and to the country's—which are inescapable concomitants of the sort of "planning" that our self-labeled "liberal" leaders are doing for us. When the people don't want large-scale "improvements"—such as superboulevards, artificial rivers, and T. V. A.'s—badly enough to pay for them, the totalitarian-minded appear to be full to overflowing of reasons why they should be built anyway. Financing is accomplished by the simple process of taking by force, in the form of tax collections, money that is not voluntarily forthcoming for luxuries that a few enjoy at the expense of many. One of this week's editorials suggests that the miners' spokesmen—in speaking up in opposition to more tax-built power plants—are setting an example in defending their own—and the nation's—interests that the railway unions' leaders would do well to emulate.

●

METTLE PLUS METAL: A feature article this week tells in words and pictures how the railroads in western New York have mobilized human brawn and mechanical power to meet the challenge of winter weather that has out-done the most-treasured memories of old inhabitants. Satanic ingenuity hardly could have devised a more obstructive aggregation of snow and ice and wind and cold, it appears, and except for the most powerful and effective machinery and the most persistent devotion of men to their duties the results of blocked yards and delayed traffic might have been even more ominous and lasting.

●

LESS OIL TRAFFIC?: The government's wartime expenditures for pipelines have brought about a sizeable addition to the facilities that will be available for the transportation of petroleum products in the post-war period. From this obvious premise the I. C. C.'s Bureau of Statistics has proceeded to look into the economics of the post-war petroleum traffic, and has reached the conclusion (reported in the news pages) that some of the pipelines may be border-line operations, even if most of the taxpayers' investment in them is written off as part of the cost of war. With more assurance, the bureau predicts that some railroads that enjoyed a substantial pre-war oil business (in the South particularly) will find less of it coming their way as a result of pipeline extensions in their territory.

●

RAILROADING IN IRAN: Because he was for nearly a year the only chaplain assigned to a 500-mile stretch of line operated by the Military Railway Service, the writer of the article on page 297 had unusual opportunities to learn at first hand, by traveling up and down the road, what these men on the trains and in the stations and shops were up against when they undertook the job of running a segment of the Iranian State Railway. Harassed passenger traffic and operating men in this country may look with some approval on one practice that prevailed in civilian operation of that road. Tickets were never sold to prospective travelers, Chaplain Smith writes, until the train arrived and the stationmaster learned from the conductor how many seats were available!

●

POST-WAR REEFERS: In an article by John M. Kelley of the Fruit Dispatch Corporation (page 304) some of the deficiencies of pre-war railroad refrigerator cars—especially as seen from the shippers' viewpoint—are discussed, and some indications are given of the directions which current research investigations in the field of refrigerated transport are taking, as such work continues beyond the recommendations already made to the railroads and car operators.

LIFE-STRETCHER: A method adopted by the Norfolk & Western to protect rail and fastenings subject to unusual corrosive conditions—such as occur in tunnels and at paved road crossings, for example—is the subject of editorial comment in this issue. The protective agent is not new, but the process of preparing the rail for its application has novel aspects, and evidence so far produced by tests in service gives rise, it is suggested, to the belief that a definite advance has been made toward a satisfactory resolution of this long-endured difficulty.

●

LATITUDE FOR LATIMER: The ostensibly neutral chairman of the Railroad Retirement Board has occupied the time of the House interstate commerce committee for a week or so with what A. A. R. Vice-President Carter Fort calls "predictions, prognostications and conjectures" in support of the brotherhoods' bigger benefits bill, thus disclosing how the board's staff (two-thirds of whose bills the railroads pay) has been occupied in building up a case for the unions' side of the question—and doing it, apparently, without keeping the carriers fully posted as to what was going on. Details appear in the news pages.

●

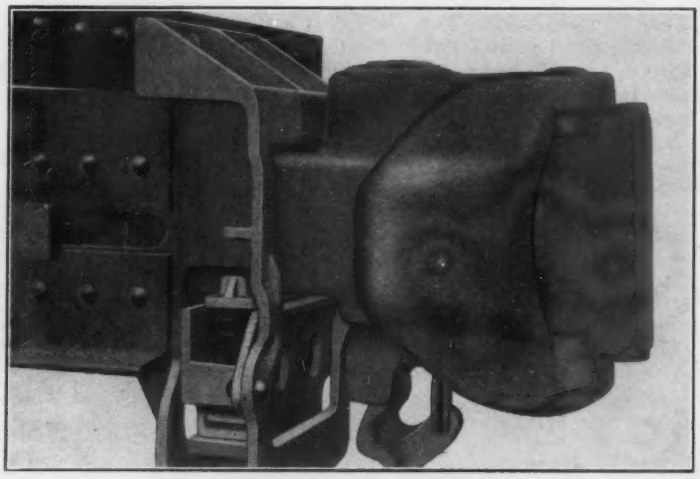
TEST OF FRIENDSHIP: Though expressions of appreciation have come to the railroads from all quarters, since Pearl Harbor, they have been, in general, the result of record-breaking performance. This winter, almost for the first time since the war began, the railroads have faltered in coping with some of the demands made upon them. Because they have been hit by phenomenal blizzards while short-handed and under-equipped, they have not always been able to deliver the goods on time. Fair-weather friends would show their true colors in such circumstances. This issue's news pages, however, indicate that appreciative customers are willing to go to bat for the railroads in this day of their adversity, as President Goodyear of the Shippers Advisory Boards did in calling for "patience and forbearance with our fellow workers."

●

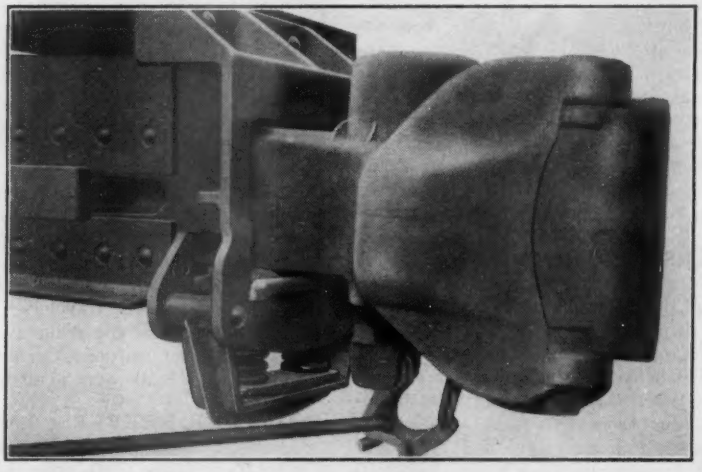
NIBBLES OF NEWS: The Canadian Pacific has established a research department to help in its preparation for post-war competition. . . . General Gross expects that a collapse of Germany, if it comes this year, will be followed by demands on the railroads for *more* transportation, rather than less. . . . Net income in 1944 was about $660 million, as compared to $873 million the year before. . . . The appropriation bill reported to the House would give the I. C. C. about $170,000 less than it was allowed this year, and over half a million less than the Budget estimate. . . . Jail sentences have been handed black-market ticket sellers. . . . The National City Bank sees railroad bonds at an all-time high, but stocks are in a different category. . . . The Boston & Maine will start its second Human & Industrial Relations course soon.

CUSHION COUPLER CARRIER AND POSITIONING DEVICE

MAINTAINS STANDARD COUPLER HEIGHT WHEN CARS ARE UNCOUPLED AND PERMITS A VERTICAL VARIATION WHEN CARS ARE COUPLED TO TAKE CARE OF UNEVEN TRACK OR LOW JOINTS, THUS CUSHIONING VERTICAL BLOWS ON COUPLER, CARRY IRON AND STRIKER.



SWIVEL BUTT APPLICATION



STRAIGHT SHANK APPLICATION

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A Bill to Establish Communism

The issue of private enterprise versus socialism, which is merely a less offensive synonym for communism, is squarely raised by the bill entitled "The Full Employment Act of 1945" that has been introduced by the War Contracts Sub-committee of the Senate Committee on Military Affairs.

This bill provides that the President shall each year present to Congress a "National Budget." The budget shall estimate the prospective volume of employment by private enterprise and the local, state and federal governments. If prospective employment should be less than "full employment," the President shall "set forth a general program for increased employment in private enterprises" and "such federal investment and expenditure as will be sufficient to bring the aggregate volume of investment . . . by private business, . . . state and local government and the federal government up to a level required to assure" full employment.

How could the President accurately estimate what would be "full employment" when present estimates of what it would be vary from 60,000,000 to 55,000,000? How could the President estimate how much employment private enterprise would or could provide, when private enterprise itself could not estimate it without knowing (1) how much it was going to be taxed and (2) to what extent, by its taxing and "investment," government was going to engage in subsidized competition with private enterprise?

From what source would the federal government derive the means for investing enough to provide a large amount of employment? To increase its indebtedness for this purpose, it would have to sell bonds. But who would be able and willing to buy large amounts of its bonds after its indebtedness had been increased by the war to $300 or $400 billion? Not the people; they will want to sell their bonds to buy automobiles and homes. Not insurance companies, business corporations and banks. They will want to invest their funds in prospectively profitable private business. And it is a certainty that if they cannot find enough prospectively profitable private business in which to invest, there will not be enough employment by private business.

Perhaps it is assumed the government could raise by taxation all it would need to spend in order to cause full employment. But there is nothing in the economic history of this or any other country to support this view. When and wherever government spending has caused full employment, as during war, government has raised most of the money it has spent by borrowing. Every cent that government spends from taxes it takes from some private company or individual, and thereby deducts it from what that company or individual otherwise could have, and probably would have, so spent as to cause more useful and productive employment than is caused by its expenditure by government.

The proposed "Full Employment Act of 1945" purports to be intended largely to stimulate employment by private enterprise. Every competent student of economics knows it would have the opposite effect. The funds for making government expenditures would be *subtracted* from what private enterprise otherwise would have available for providing employment. And the investment made by government would increase subsidized competition with and reduce the profits, and therefore, the employing ability of the railroad industry, the

public utility industry, the home-building industry and many other industries. The more employment in private industry was thus curtailed, the more demand there would be for government investment, until finally government investment would dry up private investment and employment.

The "Full Employment Act of 1945" should be entitled "An Act to Establish Communism in the United States."

The U. M. W. on T. V. A.

A recent issue of the official publication of the United Mine Workers has an article by William Mitch, president of District 20 of the U. M. W., in which he points out the unsound economics and unfairness to mine workers involved in such federal power projects as the T. V. A.

"We have T. V. A., Bonneville, Grand Coulee and some others," writes Mr. Mitch, "and the laborer has not complained. But now that we are threatened with the Seven Sisters of T. V. A.—such as the proposed Missouri Valley and Arkansas Valley Authorities, and others—it is time for us to stop and think what harm can come to us from the special privileges such water-power projects enjoy."

Mr. Mitch does not suggest that hydro-electric power, developed by the federal government, be loaded with handicaps to curtail its competition with coal. All he asks is that federally-owned electric power be not endowed, as it now is, with arbitrary favors in the form of interest-free capital and relative freedom from taxation which make it appear to consumers to be a bigger bargain than it is.

T. V. A. pays something to the local governments in lieu of property taxes—but it does not pay any federal taxes at all and, as the Wall Street Journal recently pointed out, T. V. A. sets aside only 7.2 per cent of its gross revenue for tax purposes while "the country's private power industry is obliged to give up 24.5 per cent of its gross to the tax collectors." If T. V. A. had to pay taxes and interest on its investment in the same measure that is required of the privately-owned electric utilities, it would have to charge more for its power; and its customers might use more coal or coal-produced power than they do.

It is because the federal government thus sells its power, in part, at the expense of those who have to pay standard taxes and interest on capital that it can offer rates which create a political demand for "more T. V. A.'s." Mr. Mitch estimates that the T. V. A. is unfairly and uneconomically depriving coal miners of the employment necessary to produce 4,375,881 tons of coal annually, which would yield power which honest pricing would disclose to be a better bargain for the nation than that vended by the T. V. A. This volume of coal would, but for T. V. A., move by rail, requiring a considerable additional tonnage of coal for locomotive fuel, and, incidentally, add measurably to the normal volume of railroad employment.

This country is approaching political and economic chaos, and perhaps ruin, from the activities of pressure groups, seeking and getting special privileges at the expense of society as a whole. High-tariff manufacturers were the originators of this anti-social and uneconomic practice, which has now spread by infection to political groups of ever-increasing size. Highway and waterway construction is wholly determined by pressure group activity, there being no system anywhere in the country where outlays are economically proportioned to demand as expressed by customers ready to lay cash on the line—as is required where economic activity is left to free choice of the people, and the intervention of tax-gatherers, catchpolls and jailers is not involved. Many, but not all, of the "social gains" accorded to organized labor by the New Deal consist of privileges exacted by pressure group politics rather than being based upon recognized principles of ethics, economics and political philosophy.

The undiscerning may classify Mr. Mitch's attack on T. V. A. as more pressure group politics, but this conclusion is not justified. It is not anti-social or anti-economic or unethical for a political group to demand that it be not arbitrarily discriminated against by political action. When the U. M. W. asks that federally-produced power be not given a dishonest price to the detriment of those who depend on the mining of coal for a living, that organization is *not asking a privilege* at the expense of the American people. Instead, it is *insisting upon a right* which, if granted, would benefit the people as a whole—economically as well as morally.

It is unfortunate for the future welfare of railway employees that, so far, railway union leadership—and especially its press—is less alert on this question of federally-produced power than the leadership of the U. M. W. appears to be. If it were more so, there would be less comment in railway union papers favorable to anti-railroad politicians and such other fake "liberals" as Henry Wallace. An advocate of T. V. A. or other such federal projects—equally with a defender of the present method of financing highways and waterways—is, consciously or unconsciously, a totalitarian and an enemy of political and economic freedom; because, from the very fact of this advocacy, he is sending out the tax-gatherers and the police to take people's money from them to be spent for things for which their desire is moderate or non-existent, thereby depriving them of the funds with which to make their own choice of purchases.

Employee Training

While the man-power situation, so far as train and engine crews are concerned, has become somewhat less acute, there is no reason for satisfaction in this respect. The writer recently rode a freight train on which the engineman was 29 years old, the fireman had two years' experience, the head brakeman, the swing brakeman and the flagman all had less than two months' service, while only the conductor was an old-timer. This, of course, was an exceptional case, in an area where it is difficult to recruit and hold train and engine crews, but to a lesser degree perhaps train and engine crews are equally lacking in experience throughout the country.

In spite of this, the safety record of the railways has been remarkable, although several accidents have re-

ceived a good deal of unfavorable newspaper publicity. The safety record could be still better if all of the railroads, in this period of heavy traffic with relatively inexperienced crews, would inaugurate a formal system of training for new employees. The operating department supervisors have done a splendid job on many railroads in training such new employees on an informal basis and, in this endeavor, they have been assisted by the experienced employees.

That better results may be obtained by formal programs of training is indicated by the experience of the Pere Marquette, which has adopted a visual training program for new employees that is being carried out most successfully. Further, the Western Maryland has converted a business car into an elaborate employee instruction car which, among other things, simulates the cab of a locomotive and also shows signal indications with a close replica of actual operating conditions.

Of course, these devices and other means adopted on several railways require the supervision of a trainmaster or other divisional operating officer, but with aids such as these and a formal training program, better results are being obtained than could possibly be secured through informal employee training efforts.

Rail Corrosion

The corrosion of rails and fastenings, especially in tunnels and in open track in brine-drip territory, has long presented a most baffling problem to maintenance of way departments. Individual railroads have studied this problem intensively, and various means of protection have been devised, but few, if any, have proved entirely satisfactory. To be sure, the butt-welding of rails, where done, has made possible the elimination of the joint fastenings, and with them an important phase of the corrosion problem, but there still remains the matter of protecting the remainder of the rail.

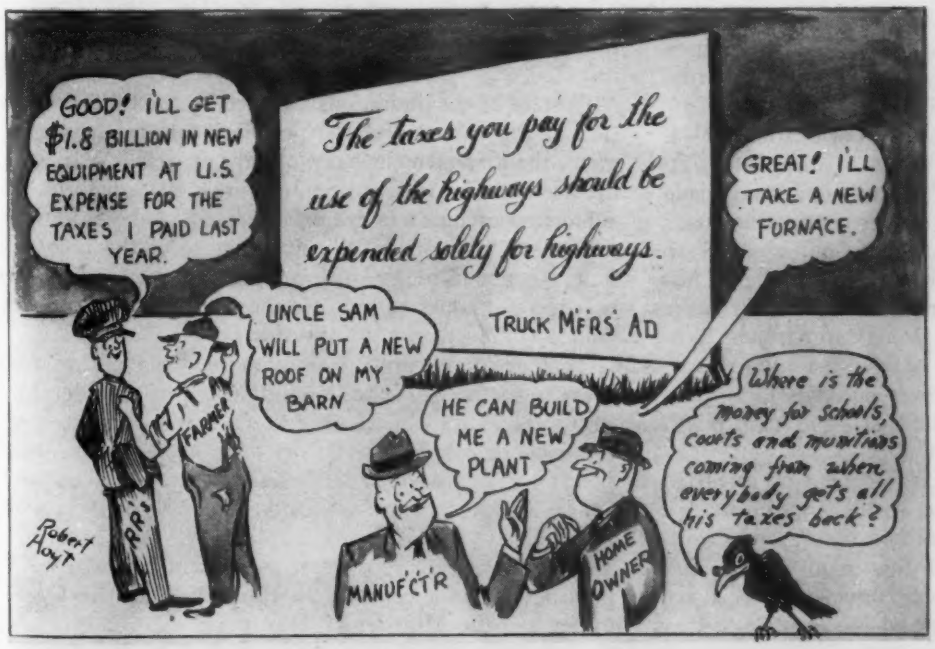
On the Norfolk & Western a method of protecting rail subject to corrosive conditions has been developed recently that is confidently expected to produce positive results. During the past several years this company has experienced considerable difficulty with head-and-web separations occurring particularly in rails in tunnels and in paved road crossings, and careful study of these failures led to the conclusion that corrosive conditions were an important contributing factor. For many years it has been the practice on this road to apply a coating of oil to the rails installed at such locations, but an important weakness of this method was the fact that the coating had a tendency to loosen and come off, especially under wet conditions, leaving the rail unprotected.

Being still convinced that oil was an effective protective agent if it could be made to stay in place, the N. & W. undertook a study to determine how the latter objective could be accomplished. One conclusion drawn was that the inability to obtain a good bond between the oil film and the rail steel was attributable largely to the presence of mill scale on the metal, which not only is likely to come off eventually, taking the oil film with it, but which frequently harbors moisture underneath the scale particles, thereby setting the stage for corrosion, even with the oil film intact.

Accepting this premise, the problem narrowed down to one of finding an effective and practicable method of removing the scale before applying the oil. The answer proved to be the oxy-acetylene flame-cleaning process, which not only loosens the scale so that it can be removed readily with wire brushes, but which also thoroughly dehydrates the metal, precluding the possibility of water being trapped under the oil film. Mindful of the cost factor involved, the road has developed a highly mechanized production line for administering the flame-cleaning and oiling treatment to the rails before laying them, with the result that the expense is only a small fraction of the cost of the rail. Going one step further, similar equipment has been developed for applying the same treatment to joint bars.

Thus, the N. & W. has probed to the core of a difficult problem and has produced a convincing answer. Rails treated in the manner described have not been in service long enough to permit more than tentative conclusions to be drawn regarding the efficacy of the treatment, but there can be little doubt that a long forward step has been made in the search for a final solution to the rail corrosion problem.

If You Believe All You Read About Transportation—5


GOOD! I'LL GET $1.8 BILLION IN NEW EQUIPMENT AT U.S. EXPENSE FOR THE TAXES I PAID LAST YEAR.
The taxes you pay for the use of the highways should be expended solely for highways.
GREAT! I'LL TAKE A NEW FURNACE.
UNCLE SAM WILL PUT A NEW ROOF ON MY BARN
TRUCK MFRS' AD
HE CAN BUILD ME A NEW PLANT
Where is the money for schools, courts and munitions coming from when everybody gets all his taxes back?
FARMER
RR'S
MANUF'CT'R
HOME OWNER
Robert Hoyt

The Genesis of Hot Box Prevention

The genesis of hot box prevention is in the mind of railway management. As a practical matter, hot boxes can never be entirely prevented or eliminated, but they can be minimized by intensive effort, even under present adverse conditions. The degree of success attending these efforts unavoidably reflects the attitude of management—with meager results where higher officers consider hot boxes a long-established and more or less unavoidable evil, and substantially better results when executive officers demand a curtailment of hot boxes and provide the necessary organization, materials and facilities to bring this about.

Proof of the disparity in hot box performance on different roads is afforded by monthly reports made to the A. A. R. Mechanical Division since September, 1942. These reports, based on the number of miles per freight car hot box set out between terminals, bear eloquent testimony to the value of organized attention by the A. A. R. and individual carriers to the subject of hot boxes, since there has been a steady improvement each month since the reports were instituted, as compared with the same month of the preceding year. Seasonal fluctuations are shown, with the poorest performance in June and July, due primarily to high atmospheric temperatures. Best results come in the early winter, with some drop off in January and February, chargeable for the most part to excessively low temperatures accompanied by snow and ice conditions. With the average figure for all roads, however, increasing from 369,665 miles per hot box set out in October, 1942, to 437,463 in October, 1943, and 446,726 in October, 1944, the question may be asked: Why worry about hot boxes?

The answer is that trains, both passenger and freight, are being delayed for the treatment of hot journals, or cutting out of cars, with attendant delays to passengers and lading, increased operating costs and maintenance expense, and the potential danger of axle failure when journals are overheated. Any hot box, in short, is one too many. Moreover, the average mileage figures quoted above conceal not only some excellent records, but others which are sub-standard.

For instance, considering the month of October, 1944, with an average performance for all roads of 446,726 miles per freight car hot box set out, one road made a record of only 47,616 miles; 63 per cent of the roads reporting made less than the average mileage and 16 roads made records in excess of 1,000,000 miles. Admitting that all comparative performance figures require intelligent interpretation; that some large roads, possibly with a high percentage of well-maintained system cars and favorable operating conditions, enjoy an advantage in this tabulation; and that some small roads, handling a high percentage of tank cars or other intensively used equipment, find it difficult to control hot boxes—some added explanation is still required for the tremendous disparity in unit hot box mileage figures.

In general, it will be found that roads with better than average figures have given intensive specialized attention to supplying packing and lubricants, whether new or reclaimed, which fully meet A. A. R. specifications, and also that they pack boxes and maintain journal-box conditions in accordance with A. A. R. rules. These rules are obviously without value unless put into effect, and the interest of executive officers on individual railroads in providing the facilities, and especially the organization and supervision, required for enforcement of lubrication rules and practices, already well-known and time-tested, will go far in assuring maximum results in hot box prevention.

British Railroads Directed from Underground

Obviously, for strategic purposes, it is necessary that there be the closest possible co-operation between the British government and its railways in mobilization and war activities. This has been recognized for at least three-quarters of a century, but modern warfare, with aerial bombardment, has engendered new problems in providing for the intense and unified operation of railways. The customary managerial functions have remained in the hands of the railway staffs, but an overall Railway Executive Committee under the direction of the Minister of Transport is responsible for the operation of the railroads. The Committee provides a unified and co-ordinated direction to insure the greatest possible contribution to the furthering of the war effort.

Traffic on the British railways is kept moving even under air raids, although the speed is reduced under such conditions. As early as the latter part of 1938 it was recognized that there should be provided for the Railway Executive Committee headquarters so protected that it could continue to function even under severe aerial bombardment. Fortunately a disused rapid transit tube station was found to be available, in which the members of the Committee and the staff could work, eat and sleep, and which would also house the telephone system. It was necessary to build a wall separating the platform from the running track of the subway, and then to rebuild the platform portion so that the necessary ventilation and equipment could be installed.

In spite of the limitations imposed by the tubular section of the tunnel and the peculiar platform arrangement, the arrangement has worked out well. War was declared on Germany on September 3, 1939, before the subterranean quarters were completed, and work was carried on with much difficulty because of the twenty-four hour working and sleeping occupation. During the sleeping hours as much of the work as possible was done away from the dormitories.

That great ingenuity was exercised in adapting the space to the needs of the Committee and its considerable staff, and that adequate conveniences and comforts are provided to carry on the work, remote from the surface, on a twenty-four hour basis, is indicated by elaborately illustrated articles recently published in the Railway Gazette (London). Incidentally, these articles, written four years ago, were only recently released for publication by the censors, the Railway Executive Committee and the Minister of Transport.

Army Railroaders as Seen by a Chaplain

They showed great ingenuity in Iran in making a "toy railroad" deliver a lot of freight—How the folks back home can help them

By CHAPLAIN S. E. SMITH

THE pomp and ceremony which attended the laying of the final rail in the Iranian State Railway near Sultanabad, Iran, in 1938, attracted little attention at the time on the part of American railroaders, who did not know then what a headache this line would become for some of them in less than five years. Early in 1943 several U. S. Army Transportation Corps railway battalions took over responsibility for the operation of this railway, to assure that it would deliver to Russia the American supplies it needed so desperately to turn back the Nazi attack. These supplies were delivered and the result was that the Nazi hordes were turned to their undoing; and American railroaders in Iran were an effective link in the process which produced this result. What had seemed like a toy railroad to these Americans when they first viewed it, taxed all of their ability and knowledge but they made it produce.

Sole Chaplain in 500 Miles

For almost a year the writer was the only chaplain assigned along five hundred miles of the Iranian railway. This assignment took me into every railway camp and into contact with the various railway battalions—shop and operating. Since I was assigned to the 730th Railway Operating Battalion while it was still in training in the homeland I am more familiar with its experiences than with those of other units. *Railway Age* readers know that a railway operating battalion is a unit of the Transportation Corps' Military Railway Service which is trained to take over and operate a portion of railroad—frequently much larger than an American division. The commanding officer of the battalion corresponds to the division superintendent and under him are officers and men to fill every job—trackmen, shopmen, operators, dispatchers, and trainmen. The 730th in Iran even pioneered in providing a "greasy spoon" high in the mountains of Iran, where the train crews could stop for a hot cup of coffee and a bite to eat. This one was under the supervision of Capt. Paul F. Bikle, known as "Pappy" to officers and men alike along the I. S. R.

The 730th was activated in 1942, its officer personnel being sponsored by the Pennsylvania Railroad which also provided some of its enlisted personnel. From various induction camps, other men with railway experience were added to it and by the time it became a part of the Military Railway Service of the Persian Gulf Command almost every railroad in America was represented in its personnel. Lt. Col. John J. Clutz was commanding officer; Major Albert L. Hunt, executive officer, and Capt. Herbert M. Curtiss, adjutant. The companies were commanded by Captains T. W. Rice, Harry Kahn, Thomas Sheridan and George Baylor.

In addition to the strenuous basic training which all of our soldiers undergo, the railway battalions also are given an intensive period of practical railroad training. For this instruction the Pennsylvania made facilities available on its Grand Rapids Division and at Fort Wayne, Ind., shops. Here the soldiers worked by the side of Pennsy employees. The camp itself was near the railroad and was composed of barracks of the "Theater of Operation" construction type.

"Faith", the Chaplain's Caboose on the Iranian State Railway

The single-track Iranian State Railroad extends from Bandar Shahpur ("Port of the Shah's Son") on the Persian gulf to Bandar Shah ("Port of the Shah") on the Caspian sea. Our soldiers have been transporting supplies from the Gulf to Teheran, the capital city, where delivery is made to the Russians. The southern part of the line crosses the Khuzestan desert on an embankment about fifteen feet high until it reaches Ahwaz and then it continues across the desert floor to Andimeschk, near the foothills. Here, during half of the year, the heat is intense. On a trip to the camp at Ahwaz last August, we stopped at a small station, where the thermometer on the shady side of the station registered 140 deg.

The "Subway Division"

When the line leaves the desert it begins climbing the mountains. In less than 150 miles there are 133 tunnels, which accounts for the fact that this part of the road was known as the "Subway division." This part of the road was not operated by the 730th*; although some of our men were assigned to the unit which took over this difficult task. Diesel locomotives are now being used here, but at the time the American soldiers began operating this division they were using steam engines with open cabs. They were intensely hot during

Chaplain Smith and His Clerk, T/5 C. J. Lenker, Prepare a Meal in Their Caboose

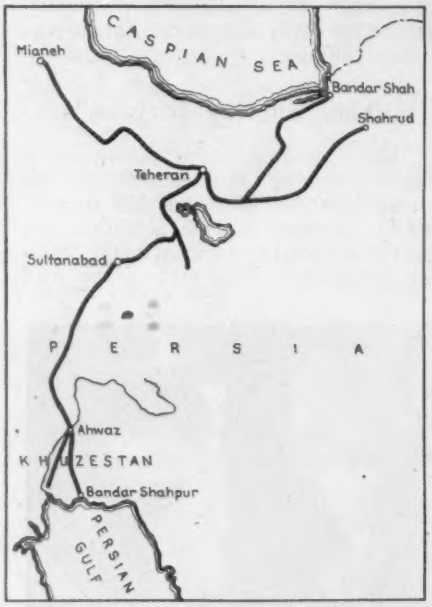
* Security regulations do not permit listing all units.

the summer and bitterly cold during the winter months.

At Nourabad the road reaches its highest point of 7,249 feet. From Sultanabad north the engineer and the Iranian brakeman, who always rides the last car, could play tag with each other. The road twists and turns, doubles back on itself, plunges down one mountain and then up another. We had so many runaways on this particular route that the crews were called "dive-bombers."

Learning the Road

The first month was spent in qualifying for the various jobs. The soldiers rode the trains with the British and Iranian crews which had been operating them. While the trainmen were familiarizing themselves with the road, other men were working twelve hours a day in the shops; trackmen were walking every foot of the track; and the men who were to serve as station operators were going through a period of schooling at Teheran under Lt. Walter T. Aye.



Map of the Iranian State Railway

These station operators were to lead a lonely existence, since at most stations there would never be more than three men, with only a chance every few weeks to visit one of the larger camps.

With the cooperation of our own supply officer, the Special Service and the Red Cross, the chaplain was able to secure books, magazines, cards and athletic equipment to help them through the weary hours. At least twice a month, Sgt. Clarence J. Lenker, my assistant, who had been a brakeman for the P. R. R., accompanied me on a visit to these men. We would hook our caboose "Faith" to any train and on the trip make a stop at each station to gossip a while with the men, conduct services and try to answer some of their personal problems.

One of the first difficulties was that of getting acquainted with sufficient Iranian terms to be able to deal with the switchmen, station agents, brakemen and coolie laborers who were all Iranians and knew very few English terms. It is surprising how well you can get along with appropriate gestures and a few words. "Telagi" means a meet at a station and "Inja" is here so that the American by combining the two words was able to convey to the switchmen the fact that the next trains would meet at the station and with a few gestures could indicate which one should be placed on the siding. "Mush-Mush" is the Persian term for sleep and someone soon learned that using that term would convey the idea that the next train would stop at the station.

Chaplain Smith Conducts a Service in a Former Barracks in a Railway Camp at Teheran

The difficulty of conversation led to a few misunderstandings. The crew of a train was told at one station by the switchmen, pointing in the general direction of the next station, "Susan she kissed." They were anxious to see the girl named Susan who kissed but discovered that the words were the Persian equivalent for "broken switch." While our men were picking up some Persian, the Iranians and especially the small boys, who swarmed about every camp, were learning American slang. In a couple of weeks they were using what is usually referred to as "railroad language."

The Author

Captain Smith was born at Mahomet, Ill., in 1897 and is a graduate of William Jewell College at Liberty, Mo., having later taken his doctorate in theology. Following attendance at the Army's School for Chaplains at Harvard, Captain Smith accompanied the 730th Railway Operating Battalion to Iran, returning to the U. S. last year to an assignment in the office of the Chief of Chaplains at Washington, D. C. Captain Smith was awarded the Legion of Merit for his service in Iran, his citation reading:

"As the only Chaplain available to a large number of troops who were operating more than 300 miles of railway, with many isolated stations located in mountainous areas, Chaplain Smith was untiring in his ministry to the spiritual welfare of the men, without regard to sect or creed. By his untiring energy and devotion to duty, he made an important contribution to the spiritual life and the morale of the troops with whom he worked, thereby reflecting great credit on himself and the military service."

Operating Difficulties

Another set of problems grew out of the equipment with which the men had to work. The track is light, using a 75-lb. rail and with 17 ties to the 41.5-ft. rail.

The engines with which we were working at first were British for the most part, with both engineer and fireman compelled to stand, the engineer on the left side of the cab. None of the engines was equipped with headlights, and it is no cinch to come down a mountain at night, with a cargo of ammunition and no lights. There were no American-type sanders and what little sand they did have was hardly worthy of the name. We were operating at first with

25 per cent brakes, only half of which were air brakes. All of the equipment had the European-type coupling and bumpers, which meant that, to couple a car, you had to stand between them, lift up the link and fit it over the hook.

The actual operation procedure also produced its problems. In the early days of the I. S. R. the Iranian stationmaster did not show the actual arrival and departure time of trains but reported those shown in the time table, because, of course, it would never do to show a train late. There was no inclination on the part of the Iranian workers to hurry and they could not understand the American's insistence on a train leaving on time. Civilian traffic was under control of the Iranian stationmaster and tickets were never sold until a train arrived and the conductor told him how many vacant seats he had.

The line was operated on an absolute manual block system. Approaching the station the crew had to await a line-clear signal given by a switchman, before proceeding into the station. The conductor then reported to the operator, who called the next station and asked for the line. If no train had started from that station, he got the line and gave the conductor a line-clear ticket—the other operator not permitting a train to leave the next station until the arrival of the train to which he had given the line. All this took a great deal of time, and the system was improved by the Americans as hereafter noted.

100 Miles in 16 Hours

The first trip I made over one division for the purpose of meeting the men and holding divine services was typical of many of the runs our men made. We left one camp carrying a load of supplies, doubleheading over the mountain. Reaching the first station the train came to a complete stop and, because of the operator's difficulty in getting a call through to the next station we waited about fifteen minutes before we received a "line-clear" ticket and proceeded. Reaching the second stop we were informed that a train was coming down and that we were in the "hole," so we had another wait. The next section of the line was a steep climb and twice we stalled, backed up a half mile or so and made another run for it. Finally, getting low on water, the engine uncoupled and made a run for water, then returned to make another effort at the hill. At last, after several attempts, every one in the crew and the members of the chaplain's party walked along the side of the track and threw dirt on the rails so the engines could get traction, and thus we made the hill. It took us sixteen hours to make a little more than a hundred miles.

On my last trip over this same division just before I returned to the states we made it in less than five hours. In the intervening months operating methods had been generally improved. Telephone dispatching had been installed. Absolute manual blocking was continued, but line-clear tickets were picked up on the fly. Sand houses for drying and screening sand had been built and repairs had been made on the sanders, the track had been improved and many other details had been improved to make it possible to move cargo. A few weeks ago I received word that a Liberty ship's lading had been delivered to the Russians in a single day at Teheran. When you move that many tons over a single-track railroad, doubleheading it most of the way, and with thirty-car trains, you are railroading.

Fighting the Heat

While these men were improving the railroad's performance, they were also building and establishing their camps, fighting the heat, sand-fly fever and a few other enemies including the ever-present saboteur. Hot boxes could be traced to sand and gravel, brakes had a habit of becoming jammed, derailments were not always accidents, and at least one engine found its way through a yard, across three switches and out on the main line where it was in the path of an oncoming train. Sabotage became practically non-existent after the British security officers rounded up a large number of Nazi sympathizers and after the Iranian government declared war on Germany.

Folks at home have plenty of questions to ask a chaplain. They want to know about the health of our men, about their morale and what they are planning when they return. I can unhesitatingly commend our medical forces for their service to soldiers overseas. Every effort is made to prevent disease and to treat it once it is contracted. The general health of our soldiers is good.

Commendation should go also to the officers who are looking after the physical interests of their men, and to the Service Forces who are getting the material to them. They have had to overcome almost insurmountable difficulties in getting supplies and equipment to our forces. There is no doubt that our army is the best equipped and best cared for army in the world.

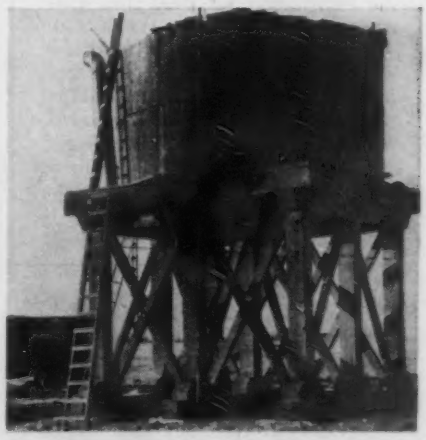
The greatest help those on the home front can be to men overseas is to back up the war effort at home one hundred per cent. When they have done this, they can then write the kind of letters which will build morale. Mail from home is the supreme morale-builder. Write newsy, encouraging letters. Tell the soldier the neighborhood gossip, tell him about the new baby across the street, about the kid brother who is helping out in the paper salvage drive, and about how his dog whipped the dog next door. Little items about the neighborhood make him feel that he is still a part of the family life at home.

As the weeks stretched into months, I found the men coming to the chaplain more frequently to discuss personal problems. Every chaplain who has served overseas has had similar experiences. Actually living with these men gives a minister a much closer contact with them. Contrary to the opinion of many people, I found that railroaders were as much or more religious than the average group. They attended divine services, liked to sing the old hymns, and in every way gave me excellent support and cooperation. This was true of both officers and enlisted personnel. They will come back to America with a greater appreciation of the spiritual aspect of things than they have ever had before.

We held religious services wherever we could get men together. The morning we left the camp at Fort Wayne, Ind., the majority of the group assembled on the drill field and there as a light rain began to fall we held a prayer service. Another was held, at the request of the men, when we landed in Iran. In the course of our months together, services were held in mess halls, barracks, on the hillside (in a snow storm) and later in the new chapels which were eventually erected in each camp.

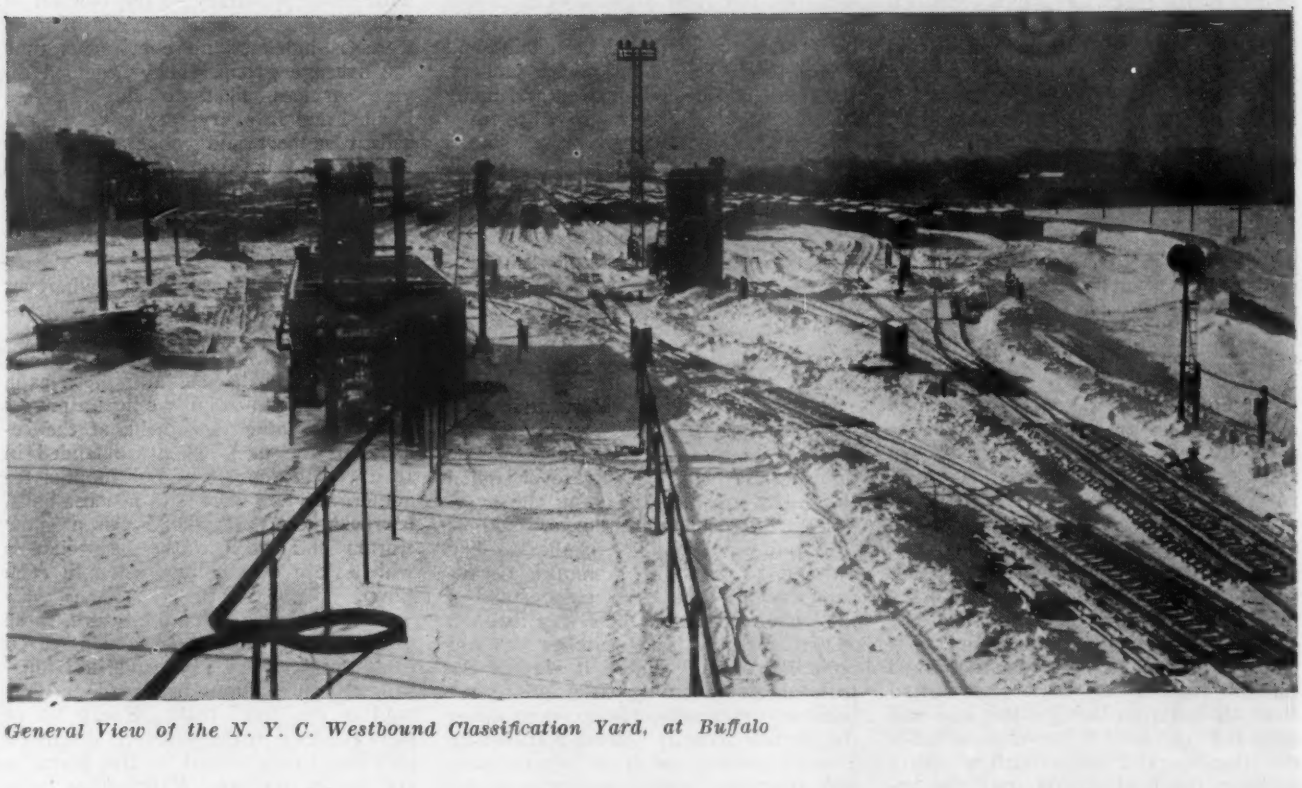
As to their plans for the future, these men are still railroaders. Dog-eared copies of *Railway Age* and individual railroad publications are read and re-read in the "rec" halls. Every bit of railway news in the papers is discussed and sometimes cussed in the barracks and in the stations. Railroading is in their blood and they are coming back, expecting to stay in this work. They have been doing a pioneer job of railroading, meeting problems and mastering them. They are coming back to the various lines in America better railroaders than they were when they left. Railroading is in their blood. Some of it must be in mine by now for I get a yearning to get out among railroaders. To the railroads and to the families of these men their chaplain would like to say they have done a real job and you have every reason to be proud of them.

* * *



A 64-Year-Old Veteran

Though it has been subjected continuously to corrosive salt air and spray, this water tank, fashioned of 3/16-in. wrought iron plates, has been supplying water to locomotives ever since 1881, when it was erected by the California Southern (now part of the Santa Fe). Thought to be one of the oldest in existence on American railroads, the tank is roofless, 16 ft. in diameter and 8½ ft. high, and is located in National City, Cal., just 200 ft. from San Diego bay.



General View of the N. Y. C. Westbound Classification Yard, at Buffalo

Roads Gain in Battle Against Weather

Additional snow and continuous cold with high winds, combined with the man-power shortage, obstruct service in Western New York State—Another embargo because of fresh storm, while many communities are reported low on fuel

Situation Improves

Latest reports as this issue goes to press indicate that the railroads in Western New York State have made the most of favorable weather on February 5-7 by getting a large amount of accumulated snow cleaned up in all the yards. A bad break in the weather could again cause bad drifts on main lines, but the yard situation in the most seriously affected areas is definitely better.

THE railroads in Western New York State have been fighting, without let-up since January 2, the toughest winter weather that "old-timers" with 45 years of service say they have ever experienced. By the week-end of January 28, as a result of a stringent three-day embargo (No. 43*) and a couple of days with only slight snowfall and moderate winds, the situation was improving. But, thereafter, fresh snowstorms in Western New York State, combined with high winds, offset much of the gain made earlier in the week, and led to a new four-day embargo† on shipments in the Northeastern part of the United States, effective February 3. Following this storm, another favorable break in the weather occurrred on February 3 and part of February 4 and, with the aid of the new embargo, considerable progress was made in clearing yards. On February 4, however, four inches of fresh snow fell to add to the 91.9-in. total this winter at Buffalo, N. Y., and the sentiments of all railroad men concerning the weather in the Western New York area were expressed by Coy Druckemiller, car service agent of the Car Service Division of the Association of American Railroads at Buffalo, when he said, "I'm praying."

This fresh snow brought the total snowfall this winter in the Syracuse area up to 114.4 in., an all-time record; at Buffalo, to well over 95 in., and at Rochester to more than 65 in.

While almost all of the eastern part of the United States north of the Ohio river has had heavy snowstorms, the most heavily hit critical area has extended through a belt about 100 miles wide from Erie, Pa., to Albany, N. Y., which is one of the most important transportation areas in the country. The main lines of the New York Central and the

A Westbound Passenger Train Leaving Rochester Station, Separated from a Freight Train by a Five-Foot Snowbank

* See January 27 *Railway Age*, page 241.

† Reported in the news section of this issue.

Erie traverse this zone. In addition, the main lines of the Lackawanna, Lehigh Valley, Nickel Plate, Pere Marquette and Wabash terminate at Buffalo, the heart of the bad-weather area, and important lines of the Pennsylvania and Baltimore & Ohio also enter Buffalo. A large amount of through traffic is interchanged at this point among these roads and also with the Canadian National.

While the amount of snowfall in the "critical belt" in Western New York has in itself been sufficient to cause trouble, this has been only partly responsible. The principal difficulty has been the winds of gale intensity, rising to 50 and 60 m.p.h., that have blown from Lake Erie and Lake Ontario, day after day for weeks, combined with the incessant snow—some days only a few inches, and other days 10 to 15 in. At the same time, low temperatures have prevailed, usually from zero to +10 or +15 deg. and, since January 1, always remaining below freezing. As one maintenance officer expressed it, "It's the damned wind, combined with some fresh snow each day, that keeps the drifts forming as fast as lines and yard tracks can be cleared." Other railway officers in this area have stressed these factors, plus the man-power shortage, as the key conditions which have made the battle against weather a continuous uphill fight since the blizzard of January 2.

The history of the snowstorms and conditions that resulted up to the end of January was reviewed in the *Railway Age* of February 3.‡ At that time, as the result of Embargo No. 43, the roads in the Buffalo area were temporarily relieved of the accumulation of traffic which was backing up in both directions, because of reduced capacity to handle it. This relief, combined with a very brief break in the weather, gave them an opportunity to get some of their yards wholly or partially cleared and branch lines opened. The main lines had been kept open at all times, although with considerable difficulty.

New Storm

On February 1, the weather turned bad again, approximately 10 in. of additional snow fell in the Syracuse area with varying amounts at other points, accompanied by a high wind. It was now a constant battle to keep the main lines open. Every cut of any size had 15 to 20-ft. drifts and this snow rose in a solid, packed wall on the outside of the tracks. As one chief engineer put it, "It had finally gotten to the point where there wasn't any place left to shove the stuff."

On February 1, on one main line, a snow plow with two locomotives pushing it got stuck in a drift. Passenger trains and freight trains were stuck on branch lines. On the main lines, the tonnage on freight trains was cut in half or they were double-headed. Snow plows were operated ahead of each train or fleet of trains and, as another maintenance man said, "the first one (train) would get through and the next one would get stuck." Similarly, passenger trains were held down to a minimum consist or double-headed and snow plows operated ahead of them.

Naturally, the lavish use of power to keep main lines open and trains operating seriously reduced the traffic capacity of the lines involved. This was offset to some extent by some curtailment of passenger service on nearly all the roads involved. Despite these conditions, all the railroad men involved must be given credit for their success in getting the *war* traffic and essential passenger traffic through at all times. Most of it was hours late, but it did get through.

Despite the new storm, which began on February 1, 10,359 cars moved through the Buffalo-Niagara Falls gateway on February 2 and approximately 16,271 cars were moved out of Buffalo in the 24-hr. period ending midnight, February 6. The heaviest previous movement since the storm conditions began was 16,158 cars on January 22.

To help speed up the freight traffic, and to avoid switching in Buffalo and other points where snow conditions in yards were bad, the roads terminating at Buffalo resorted to the practice of making up solid trains for one connection and delivering them intact, which eliminated practically all switching in the snow-congested areas. The New York Central also made solid trains of through freight between Selkirk yard (Albany) and Cleveland, Ohio, avoiding all intermediate switching, whenever possible.

Traffic Diverted

Another measure of relief has been the diversion to routes further north and south of considerable freight traffic from Chicago, St. Louis and points west, destined for New York and New England. At latest reports the Chesapeake & Ohio was handling 100 cars daily of diverted traffic, 600 cars daily were being handled by specific lots on other routes, including the Central States Dispatch routes, and some shipments to New England were routed via the Canadian lines.

As a result of the transportation difficulties, many towns in New York State and other neighboring states were reported critically short of fuel and places of amusement were ordered closed to

A Rotary Plow and Snow Plow Working on the St. Lawrence Division of the New York Central

Locomotive Cranes Loading Snow Near the Enginehouse, at Syracuse

‡ Pages 266-269.

Mexicans Cleaning Snow Out of Switches in the Rochester Yard, After the First Big Snow

Soldiers Helping Erie Men Remove Snow-Ice Bottleneck in Buffalo

conserve remaining stocks of coal. This was partially the result of the first three-day embargo, which restricted shipments of coal and food, and partially ascribable to a breakdown of local transportation by highway in many areas. The recent four-day embargo permitted shipments of solid fuels, fuel oil and essential foods. At latest reports many places in and around New York City were reported short of fuel.

Man-power Shortage

The main burden of fighting the snow and keeping yards and main lines open has fallen on the regular operating and maintenance forces, since additional help was hard to get. This was particularly true at Buffalo, where about 74 industries were getting the available labor ahead of the railroads. That the regular forces have been able to keep lines open and yards functioning with only a small proportion of the additional help that would normally be available is a tribute to the all-out efforts that these men have made. Many gangs worked the clock around and longer in weather that imposed severe hardship. Officers were on the job and stayed on the job, seeing that the men were cared for, that relief was furnished those on duty longest and that men and machines were working where they would do the most good. One district engineer had been in his office only two days since the storm of January 2. One division engineer had had only two nights of regular sleep in 10 days. These are only typical cases. Many more exceptional could be reported if the men involved were not still too busy continuing the fight, to have time as yet to talk about it.

All methods of securing additional help were tried, no matter how remote the possibilities. Some men were hired through labor agents; advertisements were published in the newspapers; appeals were broadcast over the radio; and applications were made to the War Manpower Commission

Help was secured from soldiers and sailors, both from camps and on furlough. Beginning on February 1, substantial help was also secured from New York National Guardsmen, who were called out by Governor Dewey when the fuel situation began to get critical. Several roads also had a considerable number of Mexicans in the Buffalo area. In the main, the bulk of the work fell on the regular maintenance forces on each division, augmented to some extent by regular maintenance men from other divisions less seriously affected.

Part of 125 Sailors from Sampson Naval Training Station, Dumping Snow from Flat Cars Onto Trestle Over the Genesee River at Rochester

Work equipment was a life-saver in fighting the snow. To a limited extent, the man-power shortage was offset by the intensive, continuous day-and-night use of all the equipment available, but in snow-fighting there is much work which must be done by hand. Snow plows, both the wedge type and rotaries, combined with Jordan spreaders of the composite type, equipped for snow plow work, were relied upon to keep the main lines open, and all plows and spreaders were kept running continuously.

In the yards, cranes with clam shell buckets were used to load snow trains and the snow was hauled out to trestles and dumped in the river. Jordan spreaders, and bulldozers were used to clear yard tracks and accumulations between tracks when access could be obtained. Most of the important main lines and many of the lead yard track switches were equipped with switch heaters. These had to be serviced with fuel, while other switches were cleaned by hand, as necessary, for switching movements. Snow melting cans were also used around switches. Contractors' equipment was also rented. Railroad trucks and rented trucks equipped with plows were used in many places, particularly around driveways and passenger platforms. In short, everything available that could be used efficiently was used.

New York Central

The New York Central, being the largest of the roads in the area and having the largest normal volume of traffic through Buffalo, was naturally hit the hardest. Its accomplishment in keeping all four of its main lines open, except for an occasional temporary blockade, due to a stalled train, and in keeping its hump yards at Gardenville (Buffalo), DeWitt (Syracuse) and Selkirk (Albany) in operation, despite all storm conditions, is just cause for admiration. In addition, all of the important branch lines have been kept open except for temporary blockades, including the St. Lawrence division, where one rotary plow as well as much other equipment was operated continuously.

To do this, all of the snow fighting equipment of the Lines East of Buffalo was used such as rotary snow plows; snow plows of the double-track wing type; single-track snow plows; flangers; Jordan spreaders; bulldozers; locomotive cranes; off-track cranes, and many trucks.

At Buffalo as many as 1,200 men have been employed at one time working in the four yards (Gardenville, Depew, Seneca and Lackawanna). Somewhat smaller numbers have been employed fighting snow at the Rochester yard and the DeWitt yard (East Syracuse). The DeWitt yard is the largest yard between Albany and Buffalo and at this point the snowfall has been heaviest. At Rochester, farmers and National Guardsmen helped clear the yard; and war workers, retail store employees and other citizens helped the State Guard

The Lehigh Reports

President Felix Gerard of the Lehigh Valley reported conditions on that property, as of February 5, as follows:

"I am glad to report that the situation generally has improved. While there was some additional snow over the week-end, it did not complicate things materially.

"The snow difficulties on our railroad were confined largely to the territory between Sayre, on the New York-Pennsylvania line, and Buffalo and Suspension Bridge, although early last week we had heavy snow and low temperatures around Wilkes-Barre and in the mining region.

"As of this morning, our line is open. The yards are being operated and while we have a great deal of business on the line, it is moving, and conditions are approaching normal.

"We were able to meet the worst part of the storms by mobilizing forces from all other divisions in the affected areas and supplemented this by drafts of sailors from Sampson Naval Training Center."

at Rome, N. Y., where the yards were recently reported 65 per cent cleared. At Albany, the Selkirk yard has been kept in operation continuously, although one 16-in. snowfall, about the middle of January on top of other accumulations slowed down humping and other operations for a time.

Tourist sleepers were placed on a siding at Buffalo to accommodate the extra men and a Salvation Army building was used at the Selkirk yards. The Mexicans located in various camps on the Lines East of Buffalo, including 400 at Buffalo, were a big help. Approximately 200 to 250 men were imported at various times from other divisions and 110 sailors from the Sampson Naval Training Station at Geneva, N. Y., who were replaced later by 103 other sailors, also were a big help at Buffalo. Some furloughed soldiers at Buffalo also volunteered to assist. On February 1, the Lines East received some help from the National Guard and within the next few days this number increased, as 1,600 were mobilized in the State for railroad and highway work. These men had their own trucks for transportation and had their own arrangements for securing food. They proved to be a highly mobile and helpful force.

To take care of these men fighting the snow day and night, kitchens in the camps at various yards were kept open 24 hours a day to feed the men who slept and worked in shifts.

An idea of the tremendous job involved in keeping the Buffalo yards of the Central operating may be gained by the fact that to keep only the "hump" in service at Gardenville, the receiving and classification yards with 101.7 miles of track and 328 switches must be kept clear. A further idea of the size of the problem may be gained by the fact that the Gardenville yard of the Central normally handles a total of 7,000 cars daily, 3,500 each eastbound and westbound.

On the Erie

The Erie main line between New York and Chicago passes through Hornell, N. Y., which is approximately 93 miles southeast of Buffalo. A double-track main line from Buffalo connects with the New York-Chicago line at Hornell and it was this section of line plus the yard conditions in Buffalo that were the principal headache for the Erie. Repeated trouble was also experienced on the secondary lines of the Rochester division. Both main tracks between New York and Chicago were kept open, but the main lines between Hornell and Buffalo are another story. In this section, the high winds from Lake Erie caused excessive drifting and the lines were kept open only by continuous operation of snow plows and Jordan spreaders equipped for snow plow work. On February 1 it finally became necessary to abandon the eastbound main temporarily between River Junction (Portage), N. Y., and Attica, both eastbound and westbound trains being operated thereafter over the westbound main.

The story of the yard situation on the Erie at Buffalo was told in some detail by R. E. Woodruff, president of the Erie, in last week's issue. At Buffalo, the equipment used consisted of four locomotive cranes, three Jordan spreaders with snow plows, four bulldozers, two spot tampers with pneumatic tools for ice breaking work, two or three trucks equipped with snow plows, several flangers, two weed burners, the usual snow melting cans, and various units of rented contractors' equipment.

At this terminal, the labor force was augmented by 17 Mexicans from a permanent Erie labor camp, and at various times by 44 to 65 men transferred from the vicinity of Scranton, Pa. Additional help was given by from 50 to 100 Army and Navy men and, after February 1, some National Guardsmen were also secured.

The Erie may take great credit from the fact that nearly normal movements of freight have been maintained on the main line between New York and Chicago. In addition, service has been maintained on the road's important secondary and branch lines. For example, coal from Bradford, Pa., for the Canadian National via Suspension Bridge, N. Y., has continued to move (except during the embargo periods), although the line from Salamanca, N. Y., to Buffalo was kept open only with difficulty. Similarly, coal for the New England area via the Lehigh & New England, which uses the Pine Island branch of the Erie, was also kept moving, although a 48-car coal train was stuck the night of February 1 and a 24-car coal train was stuck the following night. A second locomotive from another train succeeded in getting the first train out but the line was so badly drifted by the night of February 2 that it was originally estimated that it would take 72 hours to get the line clear and the latter train dug out. Both objectives were actually accomplished in nine hours. These are isolated but typical samples of what has been going on, requiring the all-out efforts of maintenance and operating men alike.

The Lackawanna

The Delaware, Lackawanna & Western has kept all its main line tracks open between Buffalo and New York by the continuous operation of snow plows day and night, although snow drifts as high as the stack on the locomotives were common as far as 100 miles east of Buffalo. Two double-track wing plows were used for most of the main line work and were operated between Buffalo and Dover, N. J. In the area immediately southeast of Buffalo the prevailing winds were from the southwest, causing extremely bad drifting over the eastbound main. The drifts alongside

(*Continued on page 307*)

A Jordan Spreader in the N. Y. C. Buffalo Westbound Receiving Yard (Gardenville), Looking Toward the Hump

Perishable Transport of the Future

Fruit and vegetable growers and shippers take a hand in planning of postwar refrigerator cars — Industry removes doubts in builders' minds about what it wants

There is scarcely sufficient trouble with the present method of refrigeration to warrant a change to complicated mechanically refrigerated systems. If by some relatively simple and economical methods more desirable temperatures can be secured, shippers—and ultimately the carriers too—will benefit greatly.

By JOHN M. KELLEY

Manager of Fruit Transportation, Fruit Dispatch Corporation

WHILE the refrigerator car is a familiar sight to all of us, very few realize the tremendous importance of this unit of rail equipment and how dependent we all are on its performance. Day after day, month after month, year in and year out, through all seasons, thousands of these cars are moving to and from the producing areas, transporting highly perishable farm and orchard products to the great markets of the country. We see these cars singly, in small groups, in long trains, or accumulated in larger quantities at some particular point in readiness for the movement of seasonal crops.

In the hot, blistering railroad yards and terminals of the South; in the subzero winter of the Middle West and in the snow covered territory of the North, these cars must move carrying a wide variety of products under a wide range of temperature conditions—sometimes under refrigeration, sometimes under heat and sometimes under ventilation—and frequently providing a combination of all of these services enroute.

High Spots of Past Development

With modern improvements all around us and technical advances mounting daily, it is difficult for many to understand why refrigerator car builders have not incorporated more advanced ideas in their designs. There are of course a great many reasons for this apparent slowness to adopt improvements. The need to keep the car simple and foolproof for operation everywhere, the heavy initial investment and high maintenance cost of more elaborate mechanical equipment, and the uncertainty or lack of knowledge of the exact requirements of the shipper, have been largely responsible. To this we must add the reluctance of the railroads and private car lines to change the basic designs because of their unwillingness to deviate radically from their individual carline standards.

Perhaps the first greatest advance toward improving and standardizing the refrigerator car followed the very commendable work of the U. S. Department of Agriculture, working in cooperation with the U. S. Railroad Administration and other Government and trade groups, from 1918 to 1922. At this time many good ideas, the worth of which had been proved by test, were incorporated in the design of the common service refrigerator car. As a result of combined efforts on the part of these agencies in 1921 and 1922, a great step forward was taken and a degree of efficiency not previously approached was set for the common refrigerator.

Joint Conferences Urged

These standards were generally adhered to without much change until about 1935, when a new car building program was started under new specifications drawn up by the Association of American Railroads, which likewise embodied recommendations of the U. S. Department of Agriculture. In this year the A. A. R.'s Mechanical Advisory Committee made a comprehensive engineering report to the Federal Coordinator of Transportation, Joseph B. Eastman, which included an excellent section on all types of refrigerator cars. We in the Association feel that the time is again opportune for joint conferences with the carriers, private car lines and the Government, preparatory to taking a decisive step forward.

Aside from the two major periods just mentioned, it is probably safe to say that in normal times, when new equipment was ordered or when old equipment was rebuilt, the previous designs were followed, thus perpetuating year after year, with only minor improvements, the same type of cars that had preceded. In the years immediately prior to the present war, a number of radical improvements in refrigerator cars had been suggested. To name a few, we may mention the overhead bunker, the underslung heater car of the Canadian railroads, half-stage icing, fan cars, dry ice refrigerator cars, and a few mechanically refrigerated cars.

Regardless of the merit of many of the new devices, they have not previously received serious consideration for general adoption, because they were untried and because there was always the serious question as to how a few hundred cars of strictly advanced design would work mixed in with the more or less standard refrigerator car in regular service. These so-called modern cars would require changes in operations and some changes in equipment, particularly at icing and heating stations, and in maintenance personnel along the line. The complications this presented, together with the uncertainty of the shippers' requirements, seemed to create a stalemate.

The Shippers Take a Hand

Realizing this, the refrigerator car situation was discussed at some length at our last Annual Convention. Because of the shortage of refrigerator cars, the rapid rate at which they were wearing out, and because of the realization that many new cars will have to be built as soon as war conditions permit, we felt it was an opportune time to present the industry's views on new cars to the carriers.

It was voted that a special Refrigerator Car Committee should be formed, with representatives from every section of the country and representing fairly the many shippers of different types of commodities.

A committee of fifteen was appointed promptly and, after preliminary studies in the various fields, the first meeting was held in Chicago on August 9, 1944. As a result of this meeting, detailed recommendations were agreed upon and these recommendations were later forwarded to all railroads and private car lines, to the Association of American Railroads, the Interstate Commerce Commission, the Office of Defense Transportation and the U. S. Department of Agriculture. These recommendations received prominent attention in the trade papers and important trade journals and general interest is increasing steadily.*

D. F. Fisher, principal horticulturist of the Department of Agriculture, wholeheartedly endorsed our recommendations as representing improvements and features that their own tests have indicated as desirable. These recommendations have also been very favorably received by the Association of American Railroads, the railroads and private car lines, and interested Govern-

This article is an abstract of a statement appearing in the current year book of the Fresh Fruit & Vegetable Association. Mr. Kelley is chairman of the Association's United Refrigerator Car Committee.

* See Refrigerator Car Design Proposals, *Railway Age*, October 28, 1944, page 654.

ment agencies. Our recommendations were forwarded by V. R. Hawthorne, executive vice-chairman, to the Committee on Car Construction of the Mechanical Division of the A. A. R., who, after reviewing same, forwarded them for further study and report to the A. A. R.'s subcommittee on Refrigerator Car Construction.

Coincident with this action on the part of this committee, the railroad-controlled private car lines and private car-line owners have added new members to their Mechanical Committee and instructed them to give our recommendations immediate study for report on adoption.

In taking this action we have removed the one big obstacle which the carriers have always maintained has hindered them in making improvements, i.e., the inability of the industry as a whole to express itself firmly on the subject. With the industry taking a definite stand, the railroads and private car lines now have a clear road ahead to make the much needed improvements without fear of adverse shipper reaction.

The Job of the Refrigerator Car

A review of some of the more important figures pertaining to the number of refrigerator cars, car loadings, commodities carried, performance records, etc., will further help us to understand the problem that is facing the carriers and the industry in providing improved equipment for the future.

July 1944 statistics show that there are 141,154 freight refrigerator cars in operation on the American railroads. It has been estimated that their average age is between 10 and 11 years, although exact figures may show this average to be considerably higher. Car operators are claiming that new cars must be built to last at least 20 years. The present total shows a steady decline from the 176,107 peak reported in 1931. In addition to these, there are 3,150 passenger refrigerator cars. The Canadian railroads have 6,270 freight refrigerator cars and 492 passenger refrigerator cars.

13-14 Trips Yearly Average

Of the 141,154 freight refrigerator cars in operation in the United States, 121,111 or 85.8 per cent are owned and operated by the private car lines, whereas only 20,043, or 14.2 per cent are directly railroad owned. It is therefore readily seen that if we are to obtain improved cars, they must come largely from the railroad-controlled private car lines. The Official Railway Equipment Register lists 11 different types of freight refrigerator cars, 3 types of express refrigerators, and 3 types of fruit-vegetable ventilators, a total of 17 official types each having a separate symbol. The standard end bunker car is an RS, and the standard meat-rail car is an RSM.

Under wartime conditions it has been estimated that the average refrigerator car, under the pooling arrangement, moves loaded 60 per cent, moves empty 30 per cent, and remains idle 10 per cent of the time. It makes on the average about 14 trips per year and it is estimated that these trips are divided as follows: five under bunker ice refrigeration; one under heater service; and eight under ventilation or top ice when the bunkers are not used.

The appended tabulation is based upon the I. C. C. Freight Commodity Statistics for 1943. It shows a total of 1,898,451 refrigerator-car loadings. It will be surprising to many to know that of the total refrigerator-car loadings, fresh fruits and vegetables comprise only 45 per cent. The total number of freight refrigerator cars in service during that year was 141,867; therefore, each car averaged 13 to 14 round trips in the course of the year.

By no means all of these 1,898,451 loadings, however, consisted of strictly perishable commodities. Beverages, dried, smoked or canned meats and other canned food products together account for 32.58 per cent (nearly one-third) of the total.

Various animal products, such as fresh meat, butter and eggs, account for another 22.35 per cent of the total. Vegetables account for 26.95 per cent, of which 13.72 per cent were potatoes, and fruits for 18.12 per cent of the total. Nearly half of all the fruits consisted of citrus. Various individual commodities are listed under each sub-group in the table, in the order of their relative importance. Since 1938 it will be seen that there has been some variation in the relative importance of these commodities. This is shown quite clearly by the average figures, 1938 to 1943, as shown in the second percentage column in this table. It will be noted that fruits and vegetables as a whole now constitute a somewhat smaller percentage of all commodities carried in refrigerator cars than was formerly the case.

Hard Riding a Weakness

The average weight of the lading in refrigerator cars varies all the way from bananas, melons and tomatoes at 12 to 13 tons per car, to beverages and canned goods at 28 to 34 tons per car. It should be noted particularly, however, that the range for fruits and vegetables is only 12 to 24 tons per car, even under the heavy wartime loading. In other words, fruits and vegetables are generally considered in railroad circles to be light loads.

It is the other products shipped in refrigerator cars, exclusive of fruits and vegetables, such as beverages and canned goods, which make it necessary for the car builder to design the springs of the car for the heavier loads. If it were not for this, the car builder could use a lighter spring and snubber combination, which would provide an easier, smoother ride for the products of the fruit and vegetable industry.

While the official A. A. R. figures for

(*Continued on page 307*)

An Analysis of Refrigerator Car Traffic in 1943

Commodities by I.C.C. No.	Carloads originating	Tons originating	Tons per car	Per cent of total (1943)	Per cent of total (1938-1943 incl.)
FRUITS AND VEGETABLES					
Fresh Fruits—Except Melons and Citrus					
120—Apples, fresh	42,867	809,483	18.88	2.26	3.08
121—Bananas	38,524	476,860	12.38	2.03	4.25
127—Fruits, fresh, domestic, N.O.S.	27,076	476,110	17.58	1.43	1.66
124—Grapes, fresh	18,687	327,021	17.50	0.98	1.57
125—Peaches, fresh	12,129	170,225	14.03	0.64	1.14
128—Fruits, fresh, tropical, N.O.S.	3,103	48,552	15.65	0.16	0.18
122—Berries, fresh	1,663	34,403	20.69	0.09	0.13
Total	144,049	2,342,654	16.26	7.59	12.01
Citrus					
110—Oranges and grapefruit	150,863	3,513,442	23.29	7.95	8.15
111—Limes, lemons, etc.	15,960	329,455	20.64	0.84	0.93
Total	166,823	3,842,897	23.04	8.79	9.08
Melons					
126—Watermelons	17,763	231,496	13.03	0.94	0.98
123—Cantaloupes and melons	15,119	186,870	12.36	0.80	1.03
Total	32,882	418,366	12.72	1.73	2.01
Vegetables, Fresh					
130—Potatoes, other than sweet	260,657	5,233,609	20.08	13.72	12.27
143—Vegetables, fresh, N.O.S.	170,591	2,226,577	13.05	8.99	8.71
141—Onions	30,309	524,244	17.30	1.60	1.74
142—Tomatoes	25,302	331,526	13.10	1.33	1.54
140—Cabbage	24,801	356,820	14.39	1.31	1.32
Total	511,660	8,672,776	16.95	26.95	25.58
Total fruits and vegetables	855,414	15,276,693	17.86	45.06	48.68
OTHER COMMODITIES IN REFRIGERATOR CARS					
680—Canned food products, N.O.S.	336,335	11,319,507	33.66	17.72	15.17
210—Fresh meats, N.O.S.	273,056	4,184,941	15.33	14.38	15.52
620—Beverages	201,005	5,752,895	28.62	10.59	8.62
220—Meats, canned, dried or smoked	81,332	2,172,884	26.72	4.28	2.80
222—Packing-house products	49,212	1,156,696	23.50	2.59	2.62
240—Eggs	33,045	517,167	15.65	1.74	1.85
250—Butter	25,968	491,946	18.94	1.37	2.19
251—Cheese	19,360	432,868	22.36	1.02	1.11
231—Poultry, dressed	19,139	311,126	16.26	1.01	1.29
221—Butterine and margarine	4,585	118,375	25.82	0.24	0.15
Total	1,043,037	26,458,405	25.37	54.94	51.32
Total refrigerator carloads	1,898,451	41,735,098	21.98	100.00	100.00

Building Better Human Relations

First Boston & Maine discussion course proved so successful the experiment will be continued

THE discussion course on Human and Industrial Relations,* which was jointly sponsored by the Railroad Y. M. C. A., the Massachusetts Department of Education, the Standard Railroad Labor Organizations and the Boston & Maine Railroad, closed with graduation exercises at the Hotel Manger in Boston on Tuesday evening, January 30. The course included 10 lectures by authorities representing the viewpoints of labor, management and the public, each lecture being followed by spirited discussion. More than 180 workers, supervisors and officers took the course, the average attendance being about 150, in spite of the winter weather and the fact that some of the men came from centers as far distant as Greenfield and Concord, N. H., and New Haven, Conn. An examination was given and state certificates were awarded to 125 of the students.

It will be recalled that the course resulted from a suggestion of one of the labor leaders. It was planned under the direction of the Educational Committee of the Railroad Y. M. C. A. and special credit is due to Edward A. Dudley, executive secretary of that organization, and John P. McGrail, Massachusetts State Supervisor of Education, who was the course leader. Representatives of the workers and of the management co-operated in soliciting members for the group.

Christian Citizenship was the topic of the graduation address given by Rev. Vivien Pomeroy and the entertainment featured the Minute Men Four, a quartette made up of men from the Billerica shops, and also the Railway Express Orchestra.

"Know Your Railroad"

So marked were the results and so wide the appreciation for this course that it has been decided to promote a second one, "Know Your Railroad," which will begin in March. In evaluating the course and its success it must be kept in mind that it was planned and promoted under the auspices of the Railroad Y. M. C. A., and with the close co-operation and assistance of the Massachusetts Department of Education. The Educational Committee of the "Y" included several labor union chairmen and the membership of the study group covered all departments, the clerks in the general office promoting the project equally enthusiastically with the craftsmen at the Billerica shops. The study group included workers in the ranks and men on the supervisory and official staffs; Vice-President Smith was able to attend seven of the ten meetings.

The thought of the Educational Committee was that needless friction could be eliminated and better relations promoted between the men and management if some of their common problems could be frankly presented by representatives of both groups and discussed in open forums. No punches were pulled.

Student Doesn't Pull Punches

Possibly something of the spirit and frankness in which the members participated may be gained from the following paper which was prepared by Miss Betty M. Thomson, secretary to Mr. Dudley in the Railroad Y. M. C. A. She received a perfect score on that part of the examination which dealt with her grasp of the subjects covered in the course and also submitted this statement in which she expressed her reactions to the lectures delivered by those speakers representing the viewpoint of the public.

"The course was of interest to me, of course, from a public standpoint since my connection is neither with labor or management of the railroad. It is natural, therefore, that those lectures that dealt with the questions of labor-management relations from a general viewpoint were the lectures that impressed me most.

"Professor Slichter's address on World Economy was a beautiful piece of theory, but how it would work out in actual practice is a question in my mind. Like a great many other theories and plans for the remodeling of world economy, it overlooks too completely the little quirks of human nature, and overrules the individual in trying to devise a world scheme. I should say it would be altogether impractical to attempt to dictate to the world just what areas should engage in certain industries.

"To begin with, *who* would do the dictating? There are some industries, of course, that would fall by nature into certain areas. You can't grow cotton at the north pole. But when it comes to manufacturing, it becomes rather difficult, if not impossible, to decide that all the manufacture of shoes (let us say by way of example) shall be carried on in Czechoslovakia or all the manufacture of woolen products shall be carried on in England or Australia. Suppose it is decided (by whoever is going to do the deciding) that Czechoslovakia is going to manufacture shoes and shall henceforth be the world production center for shoes. Then suppose a contrary-minded Czech is born (and such a supposition is not too far-fetched) who is not interested in the manufacture of shoes and longs with all his heart to manufacture watches. Will that mean that this rebel must alienate himself from his home and his family and the land that perhaps he loves to travel to that part of the world where the great deciders have decided that watches shall be made?

"This is only one small weak point in Professor Slichter's plan. There are others. For example, if Czechoslovakia is *the* shoe center, can't it set the price of shoes? Suppose an independent New Englander (and you'll *have* to admit there are independent New Englanders) decides the price is too high? What law is going to prevent him from making a product of his own and bootlegging it at cut prices? Isn't it putting a little bit more trust in human nature than is altogether warranted by past experience to give one area, one section, one country, or even one continent a monopoly on some product that is vitally needed by the world as a whole?

"It seems to me that Professor Slichter's economy would fail because it would try to limit human activity, and humanity always has resented and always will resent limitations. Human beings are versatile. There is no such thing as a *nation* of shoemakers, a *nation* of cotton raisers, a *nation* of shepherds. Indeed, there is scarcely one human family that doesn't produce various talents, inclinations, skills, and abilities among its different members. To make a shoemaker out of man whose desire is to make watches is to create an unhappy citizen and unhappy citizens do not tend to create a successful society or a smooth-running world economy. So much for my reactions to Professor Slichter's World Economy.

Straight-from-the-Shoulder

"I enjoyed Father Kelly's lecture because I enjoy a straight-from-the-shoulder appeal to my higher nature. In the long run, I think this is the only way to change the world for the better. No matter how many faults our present economic system may have, it could be made to work beautifully if every man would live up to his finest impulses. The reason we fail is that we fall short of our best, and that failure would be apparent no matter what system of economy or government we might change to. World conditions can be no better until man is better, and I like to be reminded by men like Father Kelly of just what the highest expectations for human conduct are.

"Professor Magoun's lecture on Tact, Diplomacy, and Emotional Control in Labor Relations was a fine and enlightening talk on psychology. With his view I agree *almost* 100 per cent. Where I leave him and every other psychologist is at that point where they make the mistake of generalizing about human behavior. Perhaps I have a heck of a nerve opposing men as renowned in their field as he, but I have never been

* See "Labor Relations—A Common Meeting Ground," *Railway Age*, November 25, 1944, p. 804; "Management-Employee Relations," by L. W. Horning, *Railway Age*, December 30, 1944, p. 992; and "Labor-Management Negotiation Techniques," *Railway Age*, January 13, 1945, p. 140.

able to agree that *all* human beings react the same way. To my way of thinking, no two human personalities respond in exactly the same way to any experience of life. Every little incident of environment, heredity, education, and circumstance tends to make a personality what it is, and no two people *can* be alike because no two people have been affected by exactly the same set of circumstances. Even if they were, they would respond in different ways to those circumstances because of innate characteristics of mood, disposition, understanding.

"One of the most fascinating studies of my life is the study of my twin nieces—identical twins, alike in every way in appearance, health, environment, and even in I. Q., yet with personalities so different that they constantly amaze me. Reason? They look at the same set of circumstances with different eyes. What one sees is altogether lost on the other or, at least, viewed from a different angle. One is, by nature, sensitive to things of which the other is totally oblivious. Observations of this kind make me disagree with Magoun or any other psychologist who speaks of human nature as though it were a blanket affair. When, for example, he advocates reasoning with children, he forgets or disregards the fact that only a reasonable child *can* be reasoned with and all children are *not* reasonable."

Perishable Transport

(*Continued from page 305*)

fruits and vegetables do not show direct evidence of the damage caused by hard-riding cars, nevertheless 68 per cent of all the claims paid was for unlocated damage to fruits and vegetables in packages. The total claims paid per year averaged, for the past five years, $5,212,021, and the 68 per cent unlocated amounts to $3,519,984. A large proportion of this 68 per cent must certainly be caused by the "bouncing" action in hard-riding cars. For the first six months of 1944, total claims have amounted to $4,196,901.

There may be other reasons for the tremendous size of the 68 per cent unlocated figure. However, tests have demonstrated conclusively that rough riding cars do increase package breakage. The A. A. R.'s Freight Container Bureau has for years made extensive studies of the relationship of the size of the numerous container types to the inside dimensions of the car and the avoidance of unnecessary breakage and bracing. Edward Dahill, chief engineer of the Container Bureau, has been asked to work with us on this problem.

There are two chief methods for overcoming excessive bouncing. One is the use of a special snubber spring in each A. A. R. coil spring nest. This method is best suited for application to existing cars. The other method is best suited for new cars or cars which are to be completely rebuilt, that is, the use of the new types of specially designed easy riding or stabilized trucks. There are other methods for improving the riding quality of freight cars, particularly at the high speeds of the future. These methods include the use of steel wheels concentrically ground wheels, cushion underframes and soft action draft gears.

So far, none of the equipment designers have produced a snubber assembly which can provide equal protection in the same car for light and heavy loads. Perhaps such a design will be perfected in the future for the general-service refrigerator car.

Air and Highway Refrigeration

From the A. A. R. claim figures, averaged for the last five years, we find that only 8.3 per cent of the total claims paid are attributed to temperature failures, of which 1.4 per cent are for refrigeration or ventilation failures, and 6.9 per cent for freezing or heater failures. From this it would appear that there is scarcely sufficient trouble with the present method of refrigeration to warrant a change to complicated mechanically refrigerated systems.

On the other hand, it would be wrong to assume that, because the percentage of claims paid for temperature failures are relatively quite small, the temperatures provided are entirely satisfactory for all fruits and vegetables. If a standard end bunker car in good condition is provided by the railroad and it is properly iced in transit, as called for under the form of refrigeration stipulated by the shipper, there would ordinarily be no basis for a claim on account of temperature failure, although the temperatures attained in the load may not be anywhere near the ideal carrying temperature for the particular commodity. Speed of pulldown, evenness throughout load, and steadiness of temperatures are all important in the performance of the car. If by some relatively simple and economical methods, such as the use of circulating fans as recommended by our committee, more desirable temperatures can be secured, shippers—and ultimately the carriers also—will benefit greatly.

In the year just past, our committee has performed its immediate function, namely, the adoption of a united program for the design of a standardized general service refrigerator car which the railroads can adopt for the first cars to be constructed in the post-war period. We now propose to extend the activities of our committee to a broadened general transportation program for the future. We have already touched upon the first part of this new program, that is, the investigation and testing under commercial operating conditions, in cooperation with the U. S. D. A., of all the promising newer proposals in refrigerator-car design.

In addition, we plan to study other phases of the perishable transportation field, including refrigerated motor trucks, and to observe carefully developments with air cargo. With new high-speed overland highways, the reconversion of the automotive industry from war work to the construction of civilian motor trucks and trailers, there will undoubtedly be considerable expansion in the transportation of perishables by trucks.

There has been very little attempt made so far to standardize refrigerated motor-truck body design and the need for such standardization is even more urgent perhaps than in the case of the refrigerator car. Mechanical systems of refrigeration in particular should prove better suited for trucks than for rail transportation, since in the case of trucks, there is always an attendant present who can be trained as a maintenance and service man.

Furthermore, every garage is potentially a refrigeration service station. Regardless of the well established feelings of many of us that the perishable industry's interests are best served by rail transportation, we must recognize the motor truck's potentialities and must be prepared for proper utilization of this type of vehicle in our overall transportation picture.

One other phase of the general transportation picture should be of marked interest to our members, that is the entire field of perishable freight protection in transit. The I. C. C., the U. S. D. A. and other official agencies have stressed the importance of more uniform control based upon inside temperature readings in transit and thermostatically controlled car heaters. To facilitate this kind of protective service some means of reading inside car temperatures from outside of the cars would be extremely valuable. The "liquidometers" which we have recommended will provide for this need.

Roads Gain in Battle

(*Continued from page 303*)

this track got so high and were so solidly packed that reverse plowing with two plows was finally resorted to. With this system, one plow would throw the snow from the eastbound track over onto the westbound track and a second plow on the westbound track, operating against the current of traffic, would follow, plowing the snow off on the side that was not drifting.

Considerable trouble was experienced on the Syracuse-Utica division which was equipped with one Jordan spreader, two double-track wing plows, two single-track plows and two locomotive cranes.

The Lackawanna has several yards at Buffalo of which the one at East Buffalo is the largest. At this terminal, seven locomotive cranes with clamshell buckets and two Jordan spreaders were kept constantly in use. In addition, both at Buffalo and on the Syracuse-Utica division a large amount of railroad contractor's equipment was used, such as bulldozers, auto trucks with plows for cleaning driveways, and a liberal number of kerosene snow cans, for such work as melting snow around switches.

Railroads-in-War News

C. P. R. Sets Up New Research Department

Railway plans intensive study of operating methods to prepare for post-war

With a view to meeting post-war competition through an intensive practical research into all matters of railway operation, the Canadian Pacific recently organized a new department of research, under the direction of W. A. Newman, for some years chief mechanical engineer of the railway, and more recently on loan to Federal Aircraft, Ltd., and, since October, 1944, in charge of the entire aircraft industry in Canada. It will be the duty of the research department to eliminate waste of effort and material, and so to develop and improve existing facilities and services as to anticipate all contingencies.

In addition to his new position, with the C. P. R., Mr. Newman will continue his war-time duties as aircraft controller of Wartime Industries and Control Board in the Department of Munitions and Supply, and as administrator of the industry for the Wartime Prices and Trade Board.

Mr. Newman joined the mechanical department of the C. P. R. 34 years ago, starting out as an apprentice in Angus shops, following his graduation from Queen's university. He became chief mechanical engineer in 1928, after serving, successively, as draftsman, supervisor of betterments, assistant mechanical engineer, locomotive construction engineer, and locomotive and car construction engineer. In June, 1943, he became affiliated with Federal Aircraft, Ltd. Mr. Newman was created Member of the Order of the British Empire in the King's Honors List of June, 1943.

W. A. Newman

Keeping Customers Cooler

Steps to conserve fuel by reducing heat in passenger cars are being taken by the railroads, John J. Pelley, president of the Association of American Railroads, has informed Col. J. Monroe Johnson, Director of the Office of Defense Transportation.

Mr. Pelley told Col. Johnson that he has asked the railroads to keep the temperature in cars from exceeding the 68 degrees recommended by Director of War Mobilization Byrnes for living space and public buildings. Many of the railroads, Mr. Pelley said, have already given assurance that they will cooperate in this conservation measure.

Ban Lake Movement of Eastern Coal for Locomotive Fuel

The Solid Fuels Administration has served notice that it will limit the tonnage of eastern-mined bituminous coals to be moved by Great Lakes vessels during the 1945 navigation season for industrial use by: (1) Prohibiting movement by lake of those coals for use as railroad locomotive fuel, and (2) Taking steps to determine which industrial consumers supplied by lake can convert to the use of midwestern-mined coals.

Announcement of this new policy, to be incorporated in the 1945-46 "fuel year" distribution program, and which will go into effect April 1, was made in a statement by Deputy Administrator C. J. Potter, who said expected continuing shortages in the eastern-mined coals will necessitate the limitation.

The statement explained that railroads normally receiving eastern-mined coals by lake generally have access to alternative sources of supply in the Midwest. It announced that applications for exception to the policy must be made direct to Washington and would only be granted "upon a clear and definite showing that substantial impediments to necessary war production would result from compliance with the prohibition."

Coals covered by the new policy are those mined in Bituminous Production Districts Nos. 1 through 8, which include Pennsylvania, West Virginia, Virginia, Ohio, Michigan and eastern Kentucky. In 1944, approximately 3,000,000 tons of these coals were moved on the Great Lakes for railroad locomotive use.

Report Progress in Thawing Congestion

Embargoes and break in rigor of winter aid roads in loosening yard jams

As loading of civilian freight for destinations in the storm-bound eastern states was resumed February 7, upon expiration of a 4-day embargo, the Office of Defense Transportation and the Association of American Railroads' Car Service Division were closely watching weather reports and car movement figures to discover whether the serious congestion there was definitely "licked" or whether still another embargo would have to be ordered to give railroads in the affected territory a further breathing spell in which to get operations back to a reasonably normal basis.

Restrained Optimism—As the situation appeared at mid-week, considerable progress had been made in freeing cars and yard tracks in the Niagara frontier and "upstate" New York areas where snow and ice had caused the most serious trouble, and a report from Buffalo that "all yard tracks are now passable" was regarded as particularly encouraging.

At the same time, there was no disposition to claim a conclusive victory so long as more snow and cold weather might at any time result in a renewal of the difficulties to which that section particularly has been subject since December. If further evidence of the necessity for such caution were necessary after the siege of bad weather already experienced, it was to be had in a new heavy snowfall in western New York, particularly along the shore of Lake Erie, early this week, which slowed traffic considerably.

In general, however, the weather in the area of greatest congestion was less severe, according to reports, and the relief afforded by the recent embargoes had been effective at many of the worst points, giving rise to hope in some quarters that another embargo might not be necessary. When this issue went to press no decision as to further moves of that nature had been reached, and it was understood that the character of the day-to-day weather reports would weigh heavily in arriving at such a decision.

Eight States Embargoed—"Continuing severe weather" motivated a 4-day embargo (C. S. D. No. 47) which was in effect from February 3 through February 6, according to the announcement of it made by the Office of Defense Transportation last week. This was less stringent as to the commodities affected and the region covered than embargo No. 43, which was

in effect for 3 days over the preceding week-end. The 4-day embargo applied to freight for destinations in or moving through the states of Ohio (except the Cincinnati switching district and the lines of the Wabash in that state), Pennsylvania, New York, New Jersey, Maryland, Delaware, the District of Columbia, and those parts of Virginia and West Virginia north of the Chesapeake & Ohio line from Huntington, W. Va., to Potomac Yard, Va.

Embargo No. 47 carried six exceptions. In addition to export freight on O. D. T. permits and shipments on government bills of lading issued by the armed forces, this order, like No. 43, applied also to traffic moving on commercial billing when consigned to "ordnance plants." In addition, provision was made for properly designated agents of the Army, Navy, Marine Corps, Coast Guard, Maritime Commission, War Shipping Administration, Solid Fuels Administration, Petroleum Administration, War Food Administration and War Production Board to issue certificates of essentiality to the official permit agent (W. C. Kendall, chairman of the Car Service Division), so that other shipments on commercial billing could be moved if circumstances required it, a more liberal arrangement than prevailed the preceding week-end.

Fuel Generally Excepted—Embargo 47 also excepted tank car movements and certain shipments of coal, coke and charcoal. All anthracite loadings were permitted except those destined to Canadian points through the Niagara frontier. Loadings of bituminous coal were permitted when destined for retail dealers, for railroad fuel, for New York City, for New England via junctions Wilkes-Barre, Pa., and east, and for points west of and including the Wheeling & Lake Erie line from Toledo, Ohio, to Creston and south of and including the Erie line from Creston to the New York-Pennsylvania state line and thence south of the New York state line extended eastward.

Movement of oil was maintained fairly well during the period of greatest congestion, according to a statement last week by Deputy Petroleum Administrator Davies. "The going has been tough these past few weeks," he said. "The continued cold weather has caused heavy consumption of fuel oil and further depletion of stocks already too low. Natural gas supplies have failed at numerous points in the Middle West and hundreds of tank cars of oil that otherwise would have gone to the East coast have had to be used to keep their essential war plants from shutting down.

Trucks and Barges Blocked—"One storm after another has tied the railroads into knots and cut heavily into tank car delivery," Mr. Davies said further. "Buffalo, one of the main gateways into New York and New England, has been the worst snarl, but 6,000 tank cars were tied up in a single area in Pennsylvania until untangled during the embargo last week-end (C. S. D. No. 43). The storms have blocked tank trucks from hundreds of highways, and tank cars have had to be diverted to replace the trucks. Ice is impeding tank barge navigation on the upper Ohio and has practically stopped it on the Monongahela. Barge movements on every waterway from Chesapeake Bay to the Bay of Fundy have been slowed down or stopped by ice. Every harbor from Baltimore north is fighting ice and many are ice-bound."

With advantage taken of every routing and scheduling possibility, and by "heroic effort on the part of railroad men," Mr. Davies continued, average tank car shipments into East coast territory for the week ended January 27 increased to 471,419 barrels a day, as compared to 455,945 the week before, but they still were some 75,000 barrels a day below what would have been a normal movement.

The coal situation was summed up by J. D. Battle, executive secretary of the National Coal Association, in the following statement, also released last week:

"The mine output of bituminous coal is holding up surprisingly well in the face of the difficulties occasioned by severe weather, transportation tie-ups, car shortages, and deficiencies in mine manpower. Production for the week ending January 27 aggregated 11,700,000 tons, bringing the total for the first 27 days of January to 46,000,000 tons and indicating that the total production for the month topped fifty million. These figures bespeak the herculean efforts of both the management and the miners to do all within their power to give the nation the coal that is needed.

"The railroads have been hard hit by the succession of heavy snows and the immense volume of freight, much of it of urgent military priority, that is pressing to be moved. But the railroads are continuing to do a magnificent job."

John L. Lewis, president of the United Mine Workers, was quoted in an indirect confirmation of this statement in a message he was reported to have sent the New England governors asserting that the miners were more than doing their part, that any shortage of coal in that territory was due in part to embargoes on shipments of civilian coal, and that such embargoes were "major" blunders by "government bureaucrats."

Goodyear Urges Patience—The president of the National Association of Shippers Advisory Boards, C. J. Goodyear, sent the 13 regional chairmen of that organization on February 2, following announcement of Embargo No. 47, an "appeal" for "patience and forbearance with our fellow workers on the railroads, who are now going through an extremely difficult period," and for the "utmost in co-operative effort in the speedy turn-around of cars." He wrote in part as follows:

"The seriousness of the present transportation situation in the United States is grave; so grave, in fact, as to be almost impossible of exaggeration. Weather conditions in the northeastern part of the country, particularly the area lying between the Great Lakes and the Atlantic seaboard, are perhaps the most severe that have ever been experienced. Heavy snow storms, piled one upon the other, have blocked passenger and freight trains out on many lines, and have completely paralyzed yard operations on numerous occasions and at a number of extremely important terminals. As soon as a yard or a stretch of track is cleared, another snow storm comes along and conditions revert to a situation worse than before the clearing effort was made.

"Under these conditions, tens of thousands of cars are snowed in on the railroads in the affected area, and many more thousands are held up awaiting the opportunity to pass into or through the affected area, or to make their way out of it. . . .

More Delays Foreseen—"These conditions make it necessary for the shipping public in all parts of this country to exercise a great deal of patience with the rail carriers. The effects of these weather conditions will not be removed in a few days, or even in a few weeks. The volume of traffic normally to be carried is so great that the extreme efforts which are being made will only slowly effectuate a full return to normal operation. You will have trouble getting cars, and you will have delays to shipments, certainly until the full return of open weather.

"On the other hand, the fact that so many cars are being held in the weather-bound zone has reduced the supply of empty cars for shipments from every part of the nation. The need for the most expeditious use of the cars which are available is greater than ever before. If we are to come through this crisis, and keep moving the supply of necessary materials, the task calls for the exercise of every ounce of energy that can be devoted to it, by both the railroad personnel and by shippers as well."

Another Interstate Commerce Commission Service Order, No. 280, was issued in connection with the embargoes. This went into effect February 3 to expire February 27, unless otherwise ordered. It prohibited the diversion or reconsignment of refrigerator cars loaded with fresh fruits or vegetables to points within the territory covered by Embargo 47 when such cars were shipped from the original point of origin during the 4-day period during which the embargo was in effect.

A shortage of Pullman cars, caused by operating conditions incident to the recent heavy snows and the demands of the armed forces, obliged the New York Central, on February 5, to curtail its sleeping car service between New York and Albany, Syracuse, Watertown, Oswego and Montreal, and between other points on the system. In announcing these changes in service, F. H. Baird, general passenger traffic manager, revealed that 13 sleeping car lines would be discontinued for the duration of the emergency, but that there would be maintained the usual coach service and the remainder of the sleeping car service between these same points.

A temporary curtailment, also, of week-end passenger service on the Harlem division, between New York and Chatham and North Adams, was effected February 2.

3d M. R. S. Officer Promoted

Lt. Col. Robert E. Mattson has been promoted to the rank of colonel, headquarters of the Army's Persian Gulf Command has announced.

Col. Mattson, who was assistant superintendent of the Northern Pacific at Spokane, Wash., when called to active duty with the Army in 1942, now is superintendent of transportation for the Third Military Railway Service, which operates the Trans-Iranian Railway on which vital war supplies move through the Persian Corridor to the Red Army.

Col. Mattson came to the P. G. C. on December 11, 1942. He formerly was commanding officer of the 711th Railway Operation Battalion. He is a graduate of the United States Naval Academy and Massachusetts Institute of Technology.

Gross Sees No Let-up in Sight in Roads' War Business

Regardless of the outcome of the European war, military demands for domestic transportation will probably be greater this year than in 1944, according to Maj. Gen. C. P. Gross, Chief of Transportation, Army Service Forces, who in estimating the War Department's requirements for this year, said: ". . . The Army's need for rail transportation certainly will be no less and in all likelihood will be greater than it was last year."

Gen. Gross pointed to the increasing number of wounded service men returned to this country for treatment, and to the thousands of soldiers sent back to the United States each month on furlough rotation as indicative of the "more difficult" type of transportation that the War Department must provide for on an increasing scale.

In contrast with a troop train movement involving only one point of origin and one destination, this type of travel requires arrangements to be made for thousands of widely separated destinations. In its demands upon the railroads, this travel will more than compensate for the decrease in transportation requirements for the troop population still in the United States, it was indicated.

"Should the Allies defeat Germany in 1945, our transportation estimates would have to be revised—upwards," Gen. Gross said. "The redeployment of our forces to bring the full weight of our arms against the Jap would place an unprecedented load upon the nation's transportation facilities."

With regard to freight movement, the General emphasized the accelerated program to supply the vast quantities of munitions and other critical supplies needed to power our twin offensive in Europe and the Pacific. Even with victory in Europe a tremendous freight movement still will be needed to increase the movement of supplies to the Pacific. There also will be a vast flow of relief supplies to our East coast and Gulf coast ports for devastated European countries.

Heroic Exploits of Railroaders Save Lives, War Supplies

Several acts of heroism on the part of Army railroaders in France and Belgium have been reported by Headquarters, European Theater of Operations. In all cases, the deeds have resulted in the saving of lives as well as substantial amounts of Army supplies destined for forward areas.

Sgt. Ralph Latronica, of Astoria, N. Y., a former Pennsylvania employee, and now a member of the P. R. R.-sponsored 724th Railway Operating Battalion, moving troop and freight trains through France and Belgium, is credited "at the risk of his own life," with having saved 15 oil cars from destruction following a collision. As Headquarters tells it: "A train loaded with high-octane gasoline, running without lights, had rounded a bend and collided with another train. The colliding Diesel caught fire and soon ignited four cars of gasoline behind it. Sergeant Latronica, a conductor on the train, at the risk of his own life, disconnected the 15 remaining cars from the flaming mass and they were pulled away to a safe distance."

The quick thinking of Sgt. James A. Tyler, of Water Valley, Miss., conductor on a 28-car ammunition train, rolling toward the front "somewhere in France," resulted in the bulk of the train being saved following an explosion. Observing smoke issuing from the fourth rear car of his train, Sergeant Tyler jumped off the caboose, ran forward and crawled into the car to investigate. Dense smoke prevented his seeing, but when he heard powder going off he dropped from the burning car and pulled the air on the caboose, stopping the train. By this time the entire crew had become aware of the situation, and amid exploding ammunition, the head brakeman, Pvt. John R. Brown, Ensley, Ala., and fireman, Jack A. Stonestreet, Auburn, Ind., helped the conductor to uncouple the 24 forward cars.

In a Paris railway yard, Maj. William H. Derr (of Buffalo, N. Y.), superintendent of terminals in the Paris area, was on a tour of the yard when 15 stationary box cars, loaded with captured German ammunition, went up in flame. The fire spread rapidly, and just prior to the explosion, with complete disregard for himself, the major managed to disconnect the line of burning cars from 19 others also loaded with ammunition, directing the engineer of a nearby locomotive to pull the undamaged cars to safety. This deed is said to have saved numerous lives, as well as a vast amount of Army supplies stored in the yard.

11 Million Tons of Food Hauled for Armed Services in 1944

Approximately 10,900,000 tons of foodstuffs were hauled last year by American railroads for the Army and Navy, according to the Association of American Railroads. The A. A. R. announcement stated that if the cars required to handle this load were placed end to end, they would make a train reaching from coast to coast.

According to Army estimates, the railroads transported about 244,000 carloads of foodstuffs in 1944 for that branch of the service alone. This included 41,240 carloads of meats, 5,225 carloads of poultry, 3,900 carloads of butter, 4,280 carloads of fresh eggs, 12,440 carloads of sugar, and 2,800 carloads of dried beans and peas.

The Navy estimates that approximately 120,000 carloads of food were shipped by rail in this country to naval activities last year, either from producers or from supply depots to the smaller activities.

This rail movement of Navy foods consisted of about 54,000 carloads of dry provisions and 66,000 carloads of fresh, chilled or frozen foods. Included in these totals were some 22,000 carloads of canned fruits, vegetables and juices, 9,000 carloads of flour and cereals, 32,000 carloads of fresh vegetables, 10,000 carloads of fresh fruits, and 20,000 carloads of chilled and frozen meats.

The present Philippine campaign is mentioned by the A. A. R. as a good example of the job the American railroads must do to keep our armed forces supplied with food. For instance, the food requirements for the Seventh Fleet alone amounted to 2,000 tons during the first 30 days of operations in this threater. By far the great bulk of this food was carried to our seaboard distribution points by rail.

Besides the huge quantities of food which the railroads hauled for the Army and Navy last year, they moved considerable food for our allies under the Lend-Lease program. In 1944, these rail shipments amounted to approximately 121,200 carloads. Some 37,800 cars contained meats and meat products; more than 22,850 carried dairy products, and about 22,000 moved grains and cereals.

All fresh foods, such as fruits, vegetables and meats, were shipped in refrigerator cars. Freight that did not require refrigeration or ventilation, such as grain, grain products and dry foodstuffs, was hauled in box cars. Highly perishable foods, such as seafoods, strawberries and other fresh fruits and vegetables, were carried by express.

Convention Ban Is Effective

Speaking for the War Committee on Conventions, Col. J. Monroe Johnson on February 1 disclosed that only two of the first 222 formal applications for permits to hold meetings of more than 50 persons had been favorably acted upon by the committee since Justice Byrnes called for cancellation of such gatherings unless they contributed directly to the war effort.

The committee at that time was receiving about 650 communications a week regarding conventions, Col. Johnson said, of which about one-half were applications for permits. These are being acted on in order of receipt, he explained, but in view of the delay in answering inquiries, he repeated his advice that "the yardstick used to measure the essentiality of any meeting is how the winning of the two wars we are now fighting will be impeded if the meeting in question were held to an attendance of 50 or canceled outright."

Overcharges on War Department Freight Bills

Overcharges on Army freight bills have been running "around twenty-five to thirty million dollars a year," according to a statement made by Comptroller General Warren at hearings last month before a House appropriations subcommittee. The subcommittee was considering the fiscal 1946 Independent Offices Appropriation Bill, which was reported this week.

The comptroller general's statement on the overcharges came in the course of his discussion of activities of the General Accounting Office, the appropriations for which are carried in the bill. "Do you know," he said, "there is no audit made except by the General Accounting Office of passenger and freight transportation charges? The freight bill for the Army alone in the last fiscal year was over $1,000,000,000, and the overcharges are running around twenty-five to thirty million dollars a year, which we are collecting back."

GENERAL NEWS

1944's Net Income Was $660,000,000

Net railway operating income for last year was $1,106,531,810

Class I railroads of the United States in the year ended December 31, 1944, had an estimated net income, after interest and rentals, of $660,000,000 according to the Bureau of Railway Economics of the Association of American Railroads. This compares with a 1943 net income of $873,478,025.

Net railway operating income, before interest and rentals, of the Class I carriers in 1944 amounted to $1,106,531,810, compared with $1,359,595,175 in 1943, a decrease of 18.6 per cent. This decrease the A. A. R. statement said, resulted largely from: (1) Increased wages growing out of adjustments made in 1943 but in some cases not effective until 1944; (2) higher prices of fuel, materials and supplies used in connection with railroad operation.

Return Only 4 Per Cent—The rate of return averaged 4.00 per cent in 1944, compared with 5.03 per cent in 1943.

Total operating revenues in 1944 amounted to $9,435,446,954 compared with $9,054,050,790 in 1943, an increase of 4.2 per cent. Operating expenses amounted to $6,281,308,309 compared with $5,657,107,080 in 1943, an increase of 11 per cent.

Class I roads in 1944 paid $1,845,345,629 in taxes, compared with $1,849,020,258 in 1943. Sixteen Class I roads failed to earn interest and rentals in 1944, of which eight were in the Eastern district, one in the Southern region, and seven in the Western district.

Total operating revenues in December, 1944, amounted to $755,514,804 compared with $781,703,513 in December, 1943, a decrease of 3.4 per cent. Operating expenses for the month totaled $555,114,327 compared with $599,124,095 in December, 1943, a decrease of 7.3 per cent. Taxes accrued in December amounted to $114,025,886 compared with $99,425,717 in December, 1943. Net railway operating income was $69,804,963, compared with $69,548,827 in December, 1943, an increase of 0.4 per cent.

Earnings by Districts—Class I roads in the Eastern district in 1944 had an estimated net income of $268,000,000 compared with $352,568,671 in 1943. Their 1944 net railway operating income was $455,304,485, compared with $558,915,389 in 1943.

Gross in the Eastern district in 1944 totaled $4,082,071,045, an increase of 2.8 per cent compared with 1943, while operating expenses totaled $2,894,753,738, an increase of 10.6 per cent.

Class I roads in the Southern region in 1944 had an estimated net income of $91,000,000 compared with $131,396,078 in 1943. Those same roads had a 1944 net railway operating income of $163,169,102 compared with $198,195,976 in 1943. Gross in the Southern region in 1944 totaled $1,332,947,262, an increase of 3 per cent compared with 1943, while operating expenses totaled $839,093,267, an increase of 11.4 per cent above 1943.

Class I roads in the Western district in 1944 had an estimated net income of $301,000,000 compared with $389,513,276 in 1943. Their 1944 net railway operating income was $488,058,223, compared with $602,483,810 in 1943. The 1944 gross in the Western district totaled $4,020,428,647, an increase of 6.1 per cent compared with 1943, while operating expenses totaled $2,547,461,304, an increase of 11.4 per cent above 1943.

Julius G. Luhrsen Proposed for Retirement Board

Railroad labor organizations are understood to have recommended Julius G. Luhrsen, executive secretary-treasurer of the Railway Labor Executives Association, to President Roosevelt for appointment to the Railroad Retirement Board. Mr. Luhrsen would become the labor representative on the board, succeeding Lee M. Eddy whose term expired on August 29, 1944.

Previously, the labor organizations are understood to have recommended Mr. Eddy for reappointment, but the President has made no move to fill the vacancy these past five and one-half months. Mr. Eddy, a former vice-president of the Order of Railroad Telegraphers, has been labor's representative on the board since its organization. If he should now be replaced, Chairman Murray W. Latimer would be the only survivor of the original membership. The first management representative, James A. Dailey, was replaced after one term by M. Roland Reed, was also replaced after one term by the present management representative—Frank C. Squire.

CLASS I RAILROADS—UNITED STATES

Twelve Months Ended December 31

	1944	1943
Total operating revenues	$9,435,446,954	$9,054,050,790
Total operating expenses	6,281,308,309	5,657,107,080
Operating Ratio—per cent	66.57	62.48
Taxes	1,845,345,629	1,849,020,258
Net railway operating income (Earnings before charges)	1,106,531,810	1,359,595,175
Net income, after charges (estimated)	666,000,000	873,478,025

House Gets I. C. C. Appropriation Bill

Provides $7,890,529 for next fiscal year ending June 30, 1946

Appropriations totaling $7,890,529 to cover Interstate Commerce Commission activities during the fiscal year ending June 30, 1946, are provided in H. R. 1984, the Independent Offices Appropriation Bill, which was reported from the House committee on appropriations on February 5. I. C. C. appropriations for the current fiscal year ending next June 30 have totaled $9,194,825, but that figure includes a total of $1,133,465 for the payment of overtime compensation to employees under the act of May 7, 1943.

Overtime Wages—Because that act expires next June 30, there is no provision for overtime in the fiscal 1946 appropriation recommended by the committee, which mentioned in its report an understanding that "supplemental estimates will be submitted and considered for this purpose when and if new legislation dealing with the payment of overtime and additional compensation is enacted." Thus the $7,890,529 carried in the bill for fiscal 1946 becomes comparable with a current-year figure of $8,061,360, i. e., the $9,194,825 total less the overtime figure of $1,133,465. On this basis the fiscal 1946 figure represents a cut of $170,831 under 1945.

The overtime factor was brought out in I. C. C. Secretary W. P. Bartel's discussion of the figures at last month's hearings before a House appropriations subcommittee, the record of such hearings having been made public with the reporting of the bill. As Mr. Bartel pointed out, the fiscal 1946 estimates of the Bureau of the Budget included nothing for overtime compensation. Thus, while comparisons with the 1945 appropriations (such as that in the *Railway Age* of January 13, page 160) indicated that the 1946 estimates represented substantial cuts, most of them were actually up from the 1945 figures if the latter be adjusted to eliminate overtime. The overtime factor included amounts ranging from $446,416 in "motor transport regulation" down to $17,564 in the "signal safety systems" category. As noted in the January 13 issue, the Bureau of the Budget recommended a total of $8,433,000 for the commission in fiscal 1946. The bill's $7,890,529 is a cut of $542,471 from that estimate.

Detailed Comparisons—Comparisons of the amounts provided in the bill with the

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Hails Revival of Railroads' Credit

Bank's economic bulletin notes, however, that equities are still poorly treated

"The past few months have been a history-making period in the railroad bond market," says the Economic Bulletin of the National City Bank (N. Y.) for February. "Well-secured obligations of the roads have risen to the highest prices ever reached by comparable issues, and large public offerings to refund outstanding securities, at net interest costs to the carriers which in many cases are the lowest ever recorded, have been outstandingly successful. These developments signify a phenomenal recovery in rail credit as compared with the dark days of only a few years ago. They are of broad economic importance in view of the essential nature of rail transportation and the volume and widespread distribution of rail securities outstanding; and for the same reasons they have profoundly encouraging implications for the future.

Lowest Interest Rate—"The previous historical price peak in high grade rail bonds, according to long-term indexes, was reached in June, 1899, when average yields approximated 3 per cent. In the present market Moody's index of Aaa bond yields, which in 1932 had been as high as 6.75 per cent, and one year ago reached 3.01 per cent, has now declined to 2.86 per cent. Expressed on an equivalent price basis for a 4 per cent 25-year bond, this would mean a recovery from around 67 in 1932 to 117¼ a year ago and 120¼ today. Among railroad bonds of lower rating and those in default, the recovery has been even more striking. Moody's Baa rails, which yielded 14 per cent at the 1932 low, sold on a 4.45 per cent basis a year ago and yield 3.8 per cent now, and the Dow-Jones index of defaulted bond prices has risen in the past year alone from 35½ to 46.

"Within the past six months over half a billion dollars, or nearly 10 per cent of the publicly held funded debt of the solvent railroads, has been replaced by new bonds averaging over ¾ per cent lower coupon and generally with a more distant maturity. These low yield bonds, maturing mostly in 30 to nearly 60 years, impressively represent the market's recognition of the improvement in railway credit; and subsequent price rises show how well the issues have been received."

Stock Still Left Out—The stock of the railroads has been largely omitted from the higher esteem in which railroad bonds are now held, the Bulletin concedes, adding that the stockholders, "whose holdings also represent a huge investment, have received very meager returns." Some hope is entertained, however, even to these security-owners, in the observation that "never has the essential character of the service rendered by the capital invested in railway property and operation been so impressively demonstrated as during the war."

"Although the general ease in the money market has contributed to the low cost of railroad borrowing," the Bulletin goes on to say, "the chief factor is the marked improvement in railroad credit. This improvement has been accomplished by a combination of increased traffic efficiently handled and sound financial management. Varying with individual circumstances, it assumes one or more of these aspects: (1) Reduction of debt, (2) reduction of fixed charges, (3) increase in cash and in net current assets, (4) replacement of fixed interest by interest contingent on income, and (5) extension of maturities.

Fixed Interest Reduced—"In 1941 all railroads in the United States, with net investment in road, equipment, materials and supplies of $22.8 billion, had $10.6 billion of bonds outstanding in the hands of the public. During the subsequent three years this figure was reduced to under $9 billion, mainly through purchase or retirement, and the insolvent roads have drawn up reorganization plans under which debt will be reduced by at least another $1.3 billion. Under these plans, also, income bonds are replacing fixed interest bonds to the extent of around $1 billion, so that the original fixed interest debt will be reduced to between $6 and $7 billion.

"As a result of these debt reductions and lowering of interest rates by refunding and reorganization, fixed interest charges on funded debt of all U. S. railroads, upon consummation of present reorganizations, will have been decreased since 1941 from $545 million to around $350 million, and nearly all near term maturities will have been paid off or extended. In the same period excess of current assets over current liabilities including funded debt maturing within six months has increased from $800 million to $1,500 million."

1944 Railway Express Traffic Sets an All-Time High

While it was not possible, because of equipment handicaps and personnel changes, "to maintain service at the high point of efficiency existing before the war," the Railway Express Agency, in 1944, nonetheless experienced the largest traffic in its history, with shipments exceeding 200,000,000, L. O. Head, president, recently announced. Seventy per cent of the total represented war traffic, Mr. Head explained, and 1,750,000 shipments went air express, reflecting an increase of about 14 per cent over the volume of air express handled in 1943.

Philadelphia Passenger Group Elects Officers

At the annual election of officers of the Philadelphia Passenger Association, held in that city, February 5, W. E. Lutz, (city passenger agent, Chicago, Milwaukee, St. Paul & Pacific) was elected president, and M. F. X. Ivers (Santa Fe Lines) and T. A. Seery (Reading) were chosen vice-presidents.

Other officers include: E. B. Saltmer (Baltimore & Ohio), who was named secretary; A. J. Nice (Pennsylvania), treasurer; J. C. Ross (Atlantic Coast Lines), historian. A. A. Krombach (Southern Pacific), retiring president, was named to the board of governors.

House Gets Hobbs Reorganization Bill

Committee favors measure to limit "wringer" effect in recapitalizations

The House committee on the judiciary on January 31 reported favorably amendments to section 77 of the Bankruptcy Act proposed by Representative Hobbs, Democrat of Alabama, which would restrict the power of the Interstate Commerce Commission to reduce the capitalization of railroads reorganized under that statute and give the federal courts additional responsibilities in reviewing plans proposed by the commission.

Investors Driven Off—The bill (H. R. 37) was unanimously recommended for passage, the committee pointed out, because of its conviction that, "if the transportation system of the country is to be adequately financed, investment in railroad securities must be kept attractive for private investors. It is folly to expect investors to finance new railroads by purchasing stocks or junior securities which may be arbitrarily eliminated." After consideration of the reorganizations plans now pending, the committee said, its conclusion is that their consummation "would be a severe blow to railroad credit and make it well-nigh impossible for any but the richest railroads to obtain new capital on attractive terms."

The bill thus brought before the House grew out of one of similar purpose upon which a special bankruptcy subcommittee held hearings in the summer and fall of 1943. As noted in *Railway Age* of August 28, 1943, the Interstate Commerce Commission opposed that bill on the ground that it would "defeat" one of the main objectives of bankruptcy proceedings, that is, "restoration of the credit of the reorganized company." Representatives of the Railroad Security Owners' Association and the Railway Labor Executives Association also appeared in opposition to the measure, but it was vigorously supported by spokesmen for other security holders.

What Is Congress' Intent?—The committee reported that the bill is designed "to correct a very serious situation arising from the interpretation placed by the Interstate Commerce Commission and the courts upon the amendments of section 77 enacted by the Congress August 27, 1935. We believe this situation results from a misapprehension of the intention of Congress with respect to the 1935 amendments. The consequences have been and are so disastrous to railroad investors, and so dangerous to the credit of the railroads in general, that they should be corrected by legislation"

Although the statute "noes not expressly provide for any reduction in the existing total capialization" of a road undergoing reorganization, said the report, the commission has interpreted paragraph (d) of the section as authorizing it to fix the

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War-Built Pipe Lines Will Retain Business

Study finds some will carry much traffic formerly moved by tank car

Recent additions to the country's pipeline network "will exert strong pressure for competitive oil traffic in the post-war period," and it is "reasonably certain that these new lines, with lower costs than those of the railroads, will carry a considerable volume of traffic formerly moved by tank car," according to a report on "War-Built Pipe Lines and the Post-War Transportation of Petroleum," which was made public last week by the Bureau of Transport Economics and Statistics of the Interstate Commerce Commission.

The report, dated August, 1944, is Statement No. 4432 of the Bureau. A document of 140 mimeographed sheets, it was prepared by Sam G. Spal, associate economist, under the direction of Charles S. Morgan, chief carrier research analyst. Like all similar reports of the Bureau, the study is issued "as information," and it "has not been considered or adopted by the Interstate Commerce Commission."

$275 Million for Improvements—As Dr. Morgan's introduction puts it, the study undertakes to throw light on the question of how the war-built pipe lines may affect the traffic of other transportation agencies, after the emergency has passed. Dr. Morgan points out that, since 1940, "approximately 13,600 miles of trunk line, or over ten per cent of the total mileage of that year, have been constructed, converted, or reversed as to direction of flow. The total expenditure for new trunk-line facilities and changes has been estimated at over $275,000,000. In addition, the capacity of some existing systems has been expanded considerably."

The study's conclusions call the overall result of the foregoing "a sizeable permanent addition to the country's transportation facilities." The adverse effect on rail traffic in the post-war period is expected to be felt "particularly in the southern and north central states, where the railroads had a sizeable business in the transportation of refined oils." Moreover, "tank trucks, operating from the new terminals in these and other areas, will supplement the pipe lines, thereby further reducing the volume available for railroads."

Pipe Lines in South—Earlier the report had pointed out that most of the South formerly received its petroleum products by railroad and by truck from Atlantic or Gulf of Mexico ports. Mr. Spal thinks that the stage has been set for different conditions in the post-war period as a result of the construction of the Southeastern Pipe Line Company's 458-mile line from Port St. Joe, Fla., to Lookout Mountain, Ga., and the Plantation Pipe Line Company's 1,264-mile line (plus several branch lines) from Baton Rouge, La., to Greensboro, N. C.

"These two lines," the report says, "will continue to serve the southern states. . . . The Southeastern Pipe Line receives oil by tanker and barge at Port St. Joe, whereas the Plantation Line receives its shipments direct from the refineries at Baton Rouge or from other pipe lines reaching into Texas. Both these lines are able to distribute refined oils to many points in the South. Terminals on the Southeastern are within 100 miles of all cities of 10,000 or greater population in Georgia. . . .

"The Plantation Line serves a much larger area. Terminals have been established at many larger cities. . . . Moreover these [terminal] points are within easy reach by rail or truck of other large population centers. The terminals at Birmingham, Ala., and Chattanooga, Tenn., and Knoxville are near the Alabama and Tennessee rivers, respectively. Hence the transportation of refined oils by barge from these terminals is possible. The line is so placed with respect to coastal ports that the railroads operating from the ports would find it difficult to compete with it for traffic to interior points."

Comparative Rates—The report includes a table of tariff charges to 36 cities in the Carolinas and Georgia to illustrate the "advantage of pipe-line transport to interior destinations." To 13 cities the pipeline-plus-rail rate is found to be less than the current rail rate from the nearest Atlantic port (disregarding the tanker charge to the port). To five additional cities the pipe-line-plus-rail rate exceeds the rail rate from port by less than eight cents a barrel. "The tanker charge from Gulf to South Atlantic ports," the report continues, "will certainly be in excess of this difference. Hence, these cities would also be served by pipe line. Most of the rail rates in the table are motor- or water-competitive. It may be expected, therefore, that the motor charges are the same."

In 1940 rail organizations in eight southern states totaled 3,875,000 tons of refined oils and all other gasolines, and 585,000 tons of fuel, road, and petroleum residual oils. Termination totaled 5,064,000 tons and 814,000 tons, respectively. The report calculates that in terms of tonnage, the Southeastern line can handle 4,550,000 tons of gasoline a year, while the annual capacity of Plantation is 1,417,000 tons. These lines are also expected to retain business which was formerly handled by tankers.

Water Carriers Will Come Back—To the extent that the new pipe lines do not get it, the report expects that petroleum traffic shifted to the railroads because of the wartime curtailment of tanker operations, will return to the water carriers in the post-war period. The total demand for petroleum products in the immediate post-war years is not expected to exceed that of the war period; and cost is expected to be the determining factor in the choice of post-war transportation agencies.

The report's summary table of cost estimates gives 7.54 mills and 8.1 mills per ton-mile, respectively, as railroad operating expenses, including depreciation, incurred in the transportation of crude oil and gasoline

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Fort Protests Latimer Tactics on Unions' Bill

Says railroads had no chance to look over "conjectures and prognostications"

What J. Carter Fort, vice-president and general counsel of the Association of American Railroads, called "predictions, prognostications, and conjectures" of a character "never heretofore undertaken by a responsible source" were brought to the railroads' attention for the first time in the presentation made by Murray W. Latimer, chairman of the Railroad Retirement Board, at House interstate and foreign commerce committee hearings on H. R. 1362, the bill sponsored by Representative Crosser, Democrat of Ohio, to enact the Railway Labor Executives' Association's program for liberalizing the Railroad Retirement Act and Railroad Unemployment Insurance Act. As noted in the *Railway Age* of February 3, the hearings got under way on January 31; and Mr. Latimer, the Retirement Board's "neutral" member, has made the most extended presentation in support of the bill.

Elaborate Array of Data—When Mr. Fort broke in to make the foregoing complaint at the February 6 session, Mr. Latimer had been discussing an elaborate array of data and Public Health Service studies on which he had based his estimates of the cost of sickness and maternity benefits to be provided under the bill's proposed amendments to the Unemployment Insurance Act. Previously the R. R. B. chairman had discussed analyses of possible post-war trends of railroad employment and payroll, and their potential effect on unemployment benefit payments and the unemployment insurance fund.

Mr. Fort asserted that work on the material which Mr. Latimer was discussing had been going on for a period of three years, its cost being borne by the Retirement Board, two-thirds of the expenses of which are paid by the railroads. Yet, Mr. Fort went on, it is "almost incredible," but it is a fact that "this is the first time these studies have come to our attention." It was therefore "obvious" to him that neither the railroads nor the committee would be able to give proper study and consideration to the figures within a week or two weeks.

Information "Withheld"—In view of the eleventh-hour appearance of this information "withheld from us by the Retirement Board which we largely support," Mr. Fort asked the committee to have in mind the amount of work which an appraisal of the figures will entail when it fixes the date for the railroad presentation. Chairman Lea assured the A. A. R. general counsel that the matter would be given consideration by the committee at the conclusion of the labor presentations. Mr. Latimer protested that the A. A. R. had been furnished copies of his post-war employment studies "six months ago," but he admitted that the sickness and maternity

benefit studies were first brought to the attention of the carriers in his estimony that day.

At the hearing's subsequent session Mr. Latimer stated that copies of a letter he drafted some six months ago to outline his proposed testimony were available to the railroads. All the points made in his presentation were set forth in the letter, although they were not documented there, he said. Also, he said that all members of the board, including the member representing railroad management, receive copies of all memoranda and other material prepared within the board's organization. Finally, he stated that it had been proposed to publish in the board's "Monthly Review" estimates of cost of the liberalizing amendments; and that this was not done because the A. A. R. objected.

Adjusts Actuarial Valuations—Meanwhile Mr. Latimer had given further extended testimony with respect to the bill's provisions. As noted in last week's issue, 1.5 per cent of the five per cent increase in retirement taxes which would result from enactment of the bill is designed to take care of the current situation wherein the taxes are not adequate on an actuarial basis to support the existing benefits. In justifying this 1.5 per cent estimate Mr. Latimer had to explain away the results of the latest actuarial valuation of the retirement system which showed that as of December 31, 1941, the present taxes are deficient by about five per cent.

He did it by recalculating the figures on the basis of assumptions that future railroad payrolls would be larger than those shown in the report of the actuaries. "Anyone who claims, on the basis of these actuarial valuations, that the Railroad Retirement Act as it is at present will cost 10 per cent or more of payroll," Mr. Latimer said, "is predicting, although he may not know it, that the future level of payrolls in the railroad industry will average less than $3 billion annually. The 1½ per cent increase in taxes provided in H. R. 1362 to meet the tax deficit for the Railroad Retirement Act assumes a payroll of around $3.5 billion for the future. If railroad payrolls remain at the present level, taxes provided in H. R. 1362 will almost surely be excessive." In other words, Mr. Latimer's estimates, as he put it, are based on a "cautious approach rather than one of pessimism or despair."

3.5 Per Cent Tax for New Benefits—The remaining 3.5 per cent of the proposed tax increase is designed to take care of the liberalized benefits under the Retirement Act. Two-thirds of it will be required to take care of the proposed new survivor benefits, while the remainder will cover such other increased benefits as the higher minimum annuities, the crediting of prior service of red caps, the new employment-relationship proposal which will qualify an additional 10,000 or 12,000 persons for prior service credits, and the provisions for the retirement of women employees with full annuities at 60 years of age if they have 30 years of service.

Arguing in favor of the bill's proposal to make the Carriers Taxing Act Title II of the Retirement Act with the Retirement Board, instead of the Bureau of Internal Revenue, collecting the retirement taxes, Mr. Latimer pointed out that the board now collects the taxes under the Railroad Unemployment Insurance Act, adding that its machinery for that purpose could take on the retirement taxes at an additional cost of "practically nothing." He referred also to the fact that all tax matters now have to be cleared with the Bureau of Internal Revenue, and to other "difficulties." Finally, he pointed out that most of the litigation with respect to the retirement system has arisen under the taxing act, thus becoming tax cases; and Mr. Latimer does not think that the criteria generally applicable to taxes should be applied "to a socal insurance system." Also, the R. R. B. chairman favored the bill's proposal to substitute a permanent appropriation for annual appropriations to the retirement account of funds collected under the retirement taxes.

Big Unemployment Fund—Coming to his discussion of the proposed Unemployment Insurance Act amendments which would provide sickness and maternity benefits as well as more liberal unemployment payments, Mr. Latimer submitted data which showed how the unemployment insurance fund has grown to fabulous proportions. Whereas the employees pay one half of the retirement taxes, the benefits provided in the Unemployment Insurance Act are supported by a three per cent payroll tax paid entirely by the railroads. Mr. Latimer's figures showed that as of June 30, 1944, the balance in the unemployment fund after disbursements was $572,707,804. Aggregate disbursements during the period of more than five years in which the system has been in operation total only about $44,000,000; and in no benefit-year shown were the disbursements equal to one per cent of payroll. The highest was 0.75 per cent in 1940-41. The figure for 1943-44 was 0.01 per cent.

Mr. Latimer characterized the past five years as a period of "unprecedentedly low" unemployment in the railroad industry. He proceeded to discuss what he called "rather elaborate" analyses of possible post-war trends—one assuming in the second post-war year a depression of the 1920 variety and the other assuming a 1929-model slump. If the former should come, Mr. Latimer calculated that the unemployment benefit payments might reach $66,000,000 in a single year; while in a 1929-type of depression they might reach an annual peak of $80,000,000. Meanwhile, however, the unemployment fund would continue increasing in most of such depression years.

Cost of New Jobless Benefits—Mr. Latimer next calculated that the liberalizing features of the present bill would add about 12.6 per cent to the cost of unemployment benefits. To this would, of course, be added the cost of the sickness and maternity benefits, which Mr. Latminer fixed at the overall figure of about one per cent of payroll. He pointed out from time to time that the figures he was discussing involved "some estimating," but he expressed the statistician's usual confidence that errors would tend to cancel each other.

Questioning of Mr. Latimer by members of the committee began at the February 7 session of the hearing when Representative Hinshaw, Republican of California, asked him to discuss what he considered to be the "proper relationship" between social insurance arrangements for a "special industry," and those provided for "all other industries in the country." Mr. Latimer replied that special circumstances deserve special treatment, and he thinks there are special circumstances in the railroad industry. Moreover, it is his view that a special system is justified to the extent that an industry and its employees pay the full cost over and above any equitable government contribution.

Wants Government Contributions—In the latter connection Mr. Latimer had previously stated that he favored government contributions to all social insurance systems. He went on to say that if it be assumed that the government should pay one-third of the cost of the general social security system, he would not for that reason favor having the government pay one-third of the cost of the railroad system; but he would favor a government contribution equal to what would be made on account of railroad employees if they were covered in the general system.

Representative O'Hara, Republican of Minnesota, who confessed that he was "numbed" by the figures Mr. Latimer presented, asked the R. R. B. chairman if he would say that the bill proposed a "revolutionary change." It didn't seem so to Mr. Latimer, so Mr. O'Hara asked if the proposal were not of the British "Beveridge Plan" variety. Mr. Latimer replied that it "begins at the cradle," and admitted, upon prompting from Mr. O'Hara, that it "extends to the grave." He added, however, that he hoped "we've gone beyond the point where that is considered revolutionary."

When Mr. O'Hara asked if Mr. Latimer were the author of the bill, the witness replied that he had "a major hand in it," but he did not actually draft it. Representative Wolverton, Republican of New Jersey, said that it had been difficult for him to follow Mr. Latimer's estimates, and he entertained some concern that the costs of the proposed new benefits might be prohibitive from the standpoint of either party.

As noted in last week's issue, the Crosser bill has a companion in the Senate—S.293 sponsored by Senators Wheeler of Montana and Wagner of New York, Democrats. This week Mr. Wheeler, who is chairman of the Senate committee on interstate commerce, appointed a subcommittee to consider S. 293. Members of the subcommittee are: Senators Johnson of Colorado (chairman), Hoey of North Carolina, Briggs of Missouri, Democrats, Shipstead of Minnesota and Hawkes of New Jersey, Republicans.

Money for Highways

Appropriations totaling $88,000,000 for the Public Roads Administration during the fiscal year ending June 30, 1946, are provided in the Independent Offices Appropriation Bill, H. R. 1984, which was reported to the House from its committee on appropriations on February 5. This is the same as the Bureau of the Budget's estimate, noted in the *Railway Age* of January 13, page 160, and compares with ap-

propriations totaling $99,000,000 for the current fiscal year ending next June 30.

The fiscal 1946 appropriation, according to the committee's report, would include $6,000,000 for the elimination of grade crossings, the remaining $82,000,000 being distributed as follows: Federal-aid highway system, $30,000,000; secondary or feeder roads, $3,000,000; strategic highway network, $10,000,000; access roads, $35,000,000; surveys and plans, $3,000,000; Inter-American highway, $1,000,000.

Railroads File Affidavits in Anti-Trust Suit

Twenty-eight affidavits were filed by railroad officers, committees and associations in the Federal District Court in Lincoln, Neb., on February 2, in support of the motion to dismiss the government's anti-trust suit filed last August. The affidavits state that the several traffic and freight committees, had registered as "rate conferences" with the Interstate Commerce Commission on or before April 15, 1943, in accordance with I. C. C. regulations; that they conformed at all times with I. C. C. regulations; and that all joint action, if any, taken in connection with the initiation or establishment of common carrier rates, fares and charges was in compliance with such regulations.

Judge John Delehant, before whom the affidavits were filed, stated that the government, if it so desires, can make a counter-showing. If it decides not to, the case will be set for hearing at a reasonable date.

Delay on Wallace

The Senate on February 1 voted to defer until March 1 consideration of President Roosevelt's nomination of former Vice-President Henry A. Wallace for the position of Secretary of Commerce, succeeding Jesse H. Jones. The Senate had previously passed S. 375, the bill sponsored by Senator George, Democrat of Georgia, to remove the various government lending agencies, including the Reconstruction Finance Corporation, from Commerce Department jurisdiction.

The Wallace nomination had come to the Senate with an adverse report from the committee on commerce, and the delaying maneuver of Majority Leader Barkley is expected to improve the former Vice-President's chances of confirmation if the George bill of divorcement is enacted. President Roosevelt has indicated that he would sign the bill.

Personnel Needs

Needs for 84,954 additional employees were reported to the Railroad Retirement Board, as of January 1, by 189 railroads, including 84 per cent of the Class I railroads employing approximately 74 per cent of the employees in the industry. Total surpluses reported were 218. In the previous month, 186 railroads including 85 per cent of the Class I railroads employing 74 per cent of the employees in the industry reported a shortage of 90,949 and a surplus of 134 persons.

The needs according to occupation varied little from December 1, four groups showing slight increases and three declining a small amount. The needs by occupations on January 1 were as follows:

Occupational Group	Group Totals
Executives, Professional Men, Telegraphers and clerks	3,914
Trainmen and Enginemen	8,321
Skilled Trades Journeymen	13,710
Skilled Trades, Helpers and Apprentices	12,774
Laborers, Baggage, Express and Freight Handlers	43,933
Attendants, Cooks, Porters and Waiters	1,373
Miscellaneous	929
Total	84,954

The greatest need for help was, as in the previous month, in Wisconsin, Michigan, Illinois, Indiana, Ohio and Kentucky. The shortage in these states was 19,937. The area composed of Kansas, Missouri, Oklahoma, Arkansas, New Mexico, Texas and Louisiana needed 15,586 persons and Washington, Oregon, California, Nevada and Arizona, 14,176.

The Memory Lingers on in the Mind of the Customer

"Behind each used ticket is a story of human interest" is the title of a message being mailed by J. R. Coulter, chief traffic officer of the St. Louis-San Francisco, to the home address of each employee to emphasize the significance of courtesy. "One ticket," the letter reads, "may represent the first train ride of a teen-age student; another the trip of a young mother to visit her soldier-husband who has never before seen their precious bundle of life; another, an executive on an essential business trip, and so on. Many of the tickets were used by travelers on missions of joy or sorrow who will recall their ride on the Frisco the rest of their lives. Yes, long after a Frisco ticket is used, its memory remains in the mind of the customer. That's why we have always looked upon each purchaser as a potential booster of Frisco service. So let's keep on being courteous and interested in the comfort and convenience of each patron today. We'll need their good-will tomorrow."

Rate Raise Must Support Post-War Payroll

An increase in the railroad rate level after the war, when traffic will decline, appears to be the most feasible solution to the labor problem, according to Bruce E. Dwinell, general attorney of the Chicago, Rock Island & Pacific, before the Chicago regional chapter of the Association of Interstate Commerce Practitioners on February 2. Following the war, he said, it will be difficult to reduce prices, or wages, and difficult to increase rate levels because human relations will restrict economic adjustments.

If, as expected by some authorities, including the Interstate Commerce Commission, railroads have post-war gross revenues equal to the 1941 level, when net income approximated 500 million dollars, they will have a deficit of 196 million dollars on the basis of present wages and material prices.

The labor problem of the railroads is no different than that of the truck lines and the waterways but their problem collectively is different than that of other industries in which economic factors are more favorable, he continued. In 1940, he said, for each dollar of gross revenue the railroads received they paid out 46 cents in wages, the waterways paid 37 cents, and the truck lines 36 cents, while in contrast other industries paid only 20 cents.

At the same time, the railroads have a larger proportion of invested capital per dollar of revenue. In 1939 it amounted to $6 compared with $1.66 for the water carriers and $1 for each $3 of gross revenue received by the truck lines. In contrast, outside industry had an average investment of 66 cents for each gross revenue dollar.

Tax Court Rules on Retirement Depreciation Accounting

The Tax Court of the United States has ruled that, where the retirement method of depreciation accounting has been used, depreciation accruing prior to March 1, 1913, need not be considered in adjusting accounts when property is retired. The ruling was made in the court's No. 106462 proceedings, *Los Angeles & Salt Lake vs. Commissioner of Internal Revenue*, 4 T.C. 76, and grew out of controversy as to whether the company was required to reduce deductions made upon retirement of certain fixed property to the extent that depreciation was sustained before the 1913 date. Where settlements of tax accounts involving retirement depreciation are still pending, or where such accounting was used in tax years still open, it has been suggested that this principle will be applicable.

Wood Preservers Fill Vacancies Among Officers

At a recent meeting of the Executive Committee of the American Wood-Preservers' Association in Cincinnati, Ohio, J. H. Bremicker, (Pennsylvania Railroad) second vice-president of the association, was appointed first vice-president to fill the vacancy created by the death, on November 30, 1944, of S. D. Hicks, vice-president, Southern Wood Preserving Company, Pittsburgh, Pa. R. H. Rawson, consulting timber engineer, Portland, Ore., and a member of the Executive Committee, was appointed second vice-president, succeeding Mr. Bremicker. G. A. Haggander, assistant chief engineer, system, Chicago, Burlington & Quincy, and a member of several of the technical committees of the association, was appointed a member of the Executive Committee.

Black Market Ticket Sellers Get Prison Terms

Attorney General Biddle stated February 3 that the Department of Justice was engaged in drafting legislation to be submitted to Congress which, if adopted, would tighten controls over so-called black market operations in the sale of tickets for transportation agencies, including railroads.

This observation came in connection with an announcement that convictions had been obtained that day in the federal district court at Miami, Fla., in cases involving four persons sentenced for participation in illegal activities in connection with the sale of rail transportation. While these were the first

cases in which railway ticket sellers have been sentenced for such offenses since the department undertook a "drive" to eradicate these and similar operations throughout the country, Mr. Biddle pointed out that five indictments have already been returned in St. Louis, and a number of investigations are in progress in various parts of the United States.

"Black market operations in transportation are a very real interference with prosecution of the war," the Attorney General continued, "as they hamper facilities which already are loaded beyond capacity The Miami case is just the beginning.. The criminal division will continue to stress prosecution of this type of case."

Three of the four persons convicted in Miami received sentences of a year and a day in jail and $1,000 fines. The fourth was sentenced to 18 months in jail and fined $1,000.

O. D. T. Appointments

The Office of Defense Transportation has announced the appointment of Victor I. Gruber as assistant division director and Charles D. Turner as assistant to the division director of its Division of Rates.

Mr. Gruber came to the division in November, 1942, as senior rate analyst, and was promoted to assistant to the director in March, 1944. Prior to joining the O. D. T. staff, he was chief of the tariff bureau of the Reading, from which company he is on leave of absence. Mr. Turner formerly was assistant to the freight traffic manager of the Southern Steamship Company, with headquarters at Philadelphia, Pa. He joined the O. D. T. organization in April, 1943, and later was promoted to senior rate analyst.

Illinois Investigates Sleeping Car "Black Market"

Alleged black marketing of sleeping car accommodations in Illinois will be investigated, following action taken by the Illinois Senate on February 7, when it authorized the appointment of a five-man committee to make a study. The investigation was suggested in a resolution presented by Senator Roland V. Libonati, who charged that ticket scalpers, working in connivance with some railroad employees, have set up a "black market."

"Bonuses" charged by the scalpers, Mr. Libonati said, range from $5 for an upper berth and $10 for a lower berth to $25 for a roomette and $50 for a drawing room.

The investigation committee appointed consists of Senators Libonati, Chicago; Wimbish, Chicago; Bidwill, River Forest; Thompson, Galesburg; and Knox, Chicago.

The charges made came as a surprise to the railroads, in view of their cooperation with the Federal Bureau of Investigation to prevent such abuses. H. W. Siddall, chairman of the Trans-Continental Passenger Association, in commenting upon the proposed investigation, said "The railroads will be glad to get any help they can from the Illinois Senate Committee in stamping out any black market in railroad reservations that may exist in Chicago. The railroads, in fact, have been doing everything they can to keep the black market out, including the employment of two detective agencies. They also have had the assistance of the F. B. I. These investigations failed to turn up any black market in that city. But, of course, it is like everything else. When the demand exceeds the supply, it is impossible to eliminate irregularities entirely. One difficulty is that a ticket agent has no means of ascertaining whether every sale and reservation is bonafide."

Freight Car Loading

Loadings of revenue freight for the week ended February 3 totaled 738,680 cars, the Association of American Railroads announced on February 8. This was a decrease of 20,190 cars or 2.7 per cent below the preceding week, a decrease of 67,034 cars or 8.3 per cent below the corresponding week last year, and a decrease of 16,834 cars or 2.2 per cent below the comparable 1943 week.

Loading of revenue freight for the week ended January 27 totaled 758,870 cars, and the summary for that week, as compiled by the Car Service Division, A. A. R., follows:

Revenue Freight Car Loading

For the Week Ended Saturday, January 27			
District	1945	1944	1943
Eastern	138,475	161,135	151,804
Allegheny	157,015	177,624	160,609
Pocahontas	55,783	56,991	51,003
Southern	123,205	127,137	117,419
Northwestern	84,944	82,795	77,517
Central Western	125,737	125,502	106,937
Southwestern	73,711	72,706	69,381
Total Western Districts	284,392	288,003	253,835
Total All Roads	758,870	810,890	734,670
Commodities			
Grain and grain products	43,756	55,815	49,924
Live stock	14,602	15,233	13,261
Coal	165,221	185,546	169,889
Coke	14,392	15,870	15,190
Forest products	40,772	44,613	32,614
Ore	11,628	15,154	14,542
Merchandise l.c.l.	96,281	102,690	88,615
Miscellaneous	372,218	375,969	350,635
January 27	758,870	810,890	734,670
January 20	777,320	798,650	703,294
January 13	782,387	779,531	755,498
January 6	682,967	769,629	717,176
December 30	.....	584,757	643,444
Cumulative Total, 4 Weeks	3,001,544	3,158,700	2,910,638

In Canada.—Carloadings for the week ended January 27 totaled 65,356, as compared with 65,407 for the previous week, and 69,158 for the corresponding period last year, according to the compilation of the Dominion Bureau of Statistics.

Total for Canada:	Total Cars Loaded	Total Cars Rec'd from Connections
Week ended Jan. 27, 1945	65,356	35,774
Week ended Jan. 29, 1944	69,158	39,079
Cumulative Totals for Canada:		
January 27, 1945	245,687	132,008
January 29, 1944	269,900	151,174

British Railways Plan for New Trains, Stations, Equipment

"Determined to regain and surpass their former high degree of efficiency," Britain's main-line railway companies are placing great emphasis on new trains, stations, ships and improved services in making their post-war plans, T. D. Slattery, general traffic manager of the British railways in New York, has reported.

One of their first steps in this direction will be to clean up and paint existing trains, stations and equipment. Obsolete locomotives, passenger cars and freight cars will be scrapped, and because there have been no passenger cars built during the war, long-term programs for new trains and equipment are being prepared.

In the first 12 months after the war, as many facilities as possible will be restored, with newspaper and mail trains, long distance business trains, suburban services and trains to vacation spots being given top priority.

Mr. Slattery explained that the improvement schemes "include plans for tracks capable of running trains at speeds of at least 80 m.p.h., the reconstruction of bridges, widening of lines and replanning of approaches to busy traffic centers, the completion of electrification projects stopped by the war, and, at a later stage, the rebuilding of hundreds of stations on the most modern lines."

To assist manufacturers and shippers, all express freight services in operation prior to the war, will be resumed, he said.

General Charles P. Gross Made Honorary Member A. S. C. E.

At the 92nd annual meeting of the American Society of Civil Engineers, in New York on January 15-19, honorary membership in the society was conferred on Major General Charles P. Gross, head of the Transportation Corps, U. S. Army, together with four non-railroad men.

Freight and Passenger Trains Collide on N. R. of Mexico

One hundred persons were killed and 70 were injured when a freight train ran into a passenger train on the National Railways of Mexico near Cazadero, 100 mi. north of Mexico City on February 1. The nine coaches, which left the rails, carried pilgrims enroute to a religious festival for the Virgin Mary at San Juan de los Lagos.

Mediation Board Vacancy

The term of George A. Cook, member of the National Mediation Board, expired on January 31, and up to the time this issue went to press no nomination had been sent to the Senate by President Roosevelt. There is no provision in the Railway Labor Act whereby a member of N. M. B. may continue in office after his term has expired or until his successor qualifies. A former secretary of the board, Mr. Cook has been a member since 1938.

Bills in Congress

Eight additional regional "conservation authorities" like the Tennessee Valley Authority would be created under the provisions of H.R. 1824 which has been introduced in the House by Representative Rankin, Democrat of Mississippi. They would be: Atlantic Seaboard Authority; Great Lakes-Ohio Valley Authority; Missouri Valley Authority; Arkansas Valley Authority; Southwestern Authority; Columbia Valley Authority; California Authority; and Colorado Valley Authority.

A Columbia Valley Authority is proposed separately in another bill, S. 460, which has been introduced in the Senate by Senator Mitchell, Democrat of Washing-

ton. Senator Taft, Republican of Ohio, has introduced S. 459 to establish a Fair Employment Practice Commission.

Would Specifically Legalize Rate Bureaus—Another bill, S. 450, to give legal sanction to carrier rate bureaus operating under Interstate Commerce Commission supervision has been introduced by Senator Johnson, Democrat of Colorado. Senator Shipstead, Republican of Minnesota, has introduced S. 432 to increase the period of limitation on actions against railroad carriers for recovery of overcharges from two to four years.

Representative Powell, Democrat of New York, has introduced H.R. 1925 to amend the Interstate Commerce Act "so as to prohibit the segregation of passengers on account of race or color." Representative Morrison, Democrat of Louisiana, has introduced H.R. 1924 to liberalize certain benefit provisions of the Railroad Retirement Act.

House Gets I. C. C. Appropriation Bill

(*Continued from page 311*)

1945 appropriations adjusted to eliminate overtime are as follows, the fiscal 1946 figure being given first and the 1945-less-overtime figure second in each case: General administrative expenses, $2,910,445 and $2,708,445; regulating accounts, $400,000 and $426,377; safety of employees, $550,000 and $547,415; signal safety systems, $178,000 and $164,436; locomotive inspection, $500,000 and $495,405; valuation of property, $431,465 and $431,475; motor transport regulation, $2,532,619 and $2,803,584; printing and binding, $130,000 and $157,700; cost of handling penalty mail, $27,000 and $23,125; emergency car service work, $231,000 and $303,398.

In explaining why the committee had cut some of the Budget estimates, the report had this to say: "In denying increases proposing new positions under the items for 'general administrative expenses,' 'motor transport regulation,' and 'valuation of property,' the committee was governed by the man-power shortage which prevents the expansion of so-called regular activities at this time. In connection with the item for general administrative expenses the committee was advised that there presently exist 138 vacancies and that there would be an estimated unexpended balance of $200,000 at the close of the fiscal year 1945. In view of this situation the committee has felt justified in recommending an additional reduction in that item."

Secretary Bartel's statement discussing the proposed appropriations and explaining the work of the commission was the principal presentation made at the subcommittee hearings, although Commissioner Mahaffie and bureau chiefs were on hand, as usual, to discuss other matters in which the various subcommittee members were interested. Representative Hendricks, Democrat of Florida, was interested in railroad accidents and in the condition of rolling stock.

Condition of Equipment—In the former connection, Commissioner Mahaffie discussed accident figures for the first eight months of 1944 when the fatality rate was slightly better than in the comparable 1943 period. Of the equipment situation he said that "in general, so far as equipment available for service is concerned, it is probably in as favorable a condition as it has ever been. There is a very small percentage either of cars or locomotives that are not available for service. . . . It is probably true that equipment is being run nearer to its ultimate capacity for running than at any other time." This statement was "a little startling" to Mr. Hendricks who had thought that the war "would have a great effect on the equipment." So Mr. Mahaffie qualified his statement, pointing out that the commission classifies equipment as "fit for service" or "not fit"—it does not classify degree of fitness.

The discussion of the appropriation for the commission's administrative expenses brought out the fact that $302,000 of the fiscal 1946 total represents a transfer from the "motor transport regulation" category. This is in accord with the January 1 merger of the Bureau of Motor Carriers' former Section of Traffic into the Bureau of Traffic. In a subsequent discussion of this transfer, Representative Case, Republican of South Dakota, observed that the Bureau of Motor Carriers "is set up as a sort of miniature commission," and asked if similarities did not exist between some of its sections and other bureaus of the commission. Commissioner Mahaffie conceded that there is a similarity, continuing to point out how the commission has recently been paring down the Motor Bureau. He added that it will probably want to go still further along that line.

Wants More if War Ends—There was considerable questioning of Secretary Bartel as to the amount requested by the commission from the Bureau of the Budget. It developed that three requests were submitted, one assuming that the European and Pacific wars will continue in fiscal 1946, a second assuming that the war in Europe will be terminated, and a third assuming that both wars will have ended. The requests on the three bases were, respectively, as follows: $8,433,404; $8,654,409; and $9,263,023.

Representative Mahon, Democrat of Texas, wanted to make sure that the commission had enough money to complete what he called its "investigations towards eliminating discriminatory freight rates." Commissioner Mahaffie told him that there is no special appropriation for that matter, but he thought there were sufficient funds and personnel available to Division 2, which is handling the Nos. 28300 and 28310 investigations of the class rate structure and Consolidated Freight Classification. In a brief discussion of proposed uses of radio on trains, Mr. Mahaffie assured the subcommittee that the railroads are experimenting "very extensively" in that field. While he disclaimed being an expert in such matters, the commissioner doubts from his general information that any installation "can be counted on to prevent accidents," although "it should help the situation."

Activities of the Bureau of Valuation were discussed by its director, R. A. Lacey, who said that the bureau's work is about 3½ years behind. When its appropriation was cut for the current fiscal year, the bureau had to release "32 of our best men" and forego the filling of 12 vacancies. Further discussions went into the commission's action in railroad reorganization proceedings, in which connection Mr. Mahaffie supplied figures on changes in capitalization. Other data on railroad dividends and abandonments were also supplied.

Complaints from Stockholders—Later on Representative Case asked if the commission got any "kick-backs" on reorganization plans "from common stockholders who have been deprived of their stock and now the railroads are enjoying considerable earnings." Mr. Mahaffie replied that "we get some correspondence about that." And Mr. Case told him he would "send you down a little more."

Meanwhile the commission's emergency car service work had been discussed by Director V. C. Clinger of the Bureau of Service. He told Representative Hendricks that neither the situation in regard to car movements nor the car supply situation was satisfactory at that time (January 10). The "general situation," as described by Mr. Clinger was as follows: "Well, there are 430 elevators closed down because they cannot get cars to move grain. The current report, as well as I remember, shows about 30 wheat elevators closed, and the rest of them are in the Corn Belt over there in Nebraska, Minnesota and South Dakota. The refrigerator car supply is away down; the coal car supply is tight, but not as bad as the other cars. This is on account of the Lake closing."

Tie Association Calls Off Cincinnati Convention

The annual convention of the Railway Tie Association, which was scheduled to be held in the Netherland Plaza Hotel, Cincinnati, Ohio, on May 8 and 9, has been cancelled, according to a statement issued recently by Roy M. Edmonds, secretary-treasurer of the organization. At the same time it was announced that the Executive Committee will meet in St. Louis, Mo., on May 8, to transact important business and receive reports of the various committees.

Senate Gets I. C. C. Views on Three Bills

In response to requests from Chairman Wheeler of the Senate committee on interstate commerce, Commissioner Splawn, chairman of the Interstate Commerce Commission's legislative committee, has reported the commission's views with respect to three bills introduced in this Congress after their counterparts had failed to get action in the last Congress.

The I. C. C.'s previous expression of support of one of these bills was repeated. This was for S. 336, the proposal of Senator Reed, Republican of Kansas, to empower the commission to require carriers to pool the proceeds of increases allowed in general rate cases. The commission, however, would limit the applicability of this provision to railroads only.

Uniform Class Rates—The commission's views with respect to S. 81 were not expressed. This bill, introduced by Senator Hill, Democrat of Alabama, would require the commission to prescribe uniform class

rates and a uniform classification, the former to be based, in general, on distance, though the commission would have certain discretion, the interpretation of which, it was suggested, "would undoubtedly prove very troublesome." Because it now has "actively under consideration" decisions in the pending uniform class rate and uniform classification proceedings, Nos. 28300 and 28310, the commission made no recommendation as to this bill.

Another bill introduced by Senator Hill, S. 82, would in some respects modify the statement of the national transportation policy set forth in the Transportation Act of 1940, but its further result, if passed, would be the creation of three additional permanent federal transportation agencies. In this respect the bill would carry out recommendations of the defunct Board of Investigation and Research, which (as noted in *Railway Age* of May 27, 1944, page 1029) proposed that a "co-ordinating" Transportation Authority, a Public Transportation Counsel, and a Transportation Advisory Council be set up.

New Agencies Not Needed—In commenting on this bill, the commission's letter suggested that any amendment to the transportation policy that Congress might contemplate should be incorporated in the Interstate Commerce Act, rather than in another piece of legislation. Specific objections were stated to the language used in the bill, particularly on the ground that controversies might be expected to result that would hamper the commission's exercise of its duties. As to the proposals to set up additional transportation agencies, the commission remarked, "there is great likelihood that the jurisdiction of these new agencies would overlap, not only as between themselves, but also with existing agencies. It is our belief that there is no need for so elaborate a scheme of additional federal authorities."

House Gets Hobbs Reorganization Bill

(*Continued from page 312*)

capitalization of new companies, and it has done so almost entirely on an "earning power" basis. Even though estimates of prospective earning power are "necessarily speculative," the commission nevertheless has fixed new capitalizations "in all cases very substantially below the existing capitalizations, regardless of the investment in the property and of the valuation previously determined by the commission." The Supreme Court, in the Western Pacific and Milwaukee cases, has upheld the commission's interpretation, and in effect has held, the committee noted, that "these administrative findings are beyond judicial review."

Confiscation of Property—Continuing, the report said, "The result of this interpretation of the statute by the commission, and the subsequent refusal of the courts to review the commission's findings, has caused the destruction of hundreds of millions of dollars of railroad securities representing actual investment in the property made, to some extent at least, in reliance upon the belief that such investments could not be confiscated except by due process of law."

Terming the result of going through the commission's "wringer" "an unbearable hardship upon the junior investors in railroad securities" and a "real danger to railroad credit," the report pointed out that, in 5 large companies undergoing reorganization, reductions in capitalization amount to about $600 million, "although there is no question that the investment in road and equipment and the 19a valuations at the present time are far in excess of the capitalization determined by the commission."

Stocks, Earning Return, Wiped Out—While the stocks of most carriers in section 77 proceedings have been "absolutely wiped out," these stocks have generally demonstrated large earning power in recent years, the committee noted. One case was mentioned where the commission's earning power estimate was $11 million a year. In 1941 that road earned more than $18 million; in 1942, $36 million; and in 1943, $37 million. "Nevertheless the commission still says the old common stock is worthless. The stockholders are without remedy. There is in practical effect no judicial review of the action of the commission. Although its guess as to future earning power has been demonstrated to be wrong, its findings are final."

The "primary purpose" of the Hobbs bill, said the report, is "to insure that the courts shall make an independent judicial review of each plan and of the evidence upon which the plan is based. . . . This will add nothing to the requirements of the present statute as to the hearing and the scope of the evidence; it will merely direct the courts to exercise the traditional right of review, and to give the parties and the public the benefit thereof."

In that connection, "as a means of insuring that the . . . commission shall be guided by some standard in determining the permissible capitalization of the reorganized company," the report pointed out, "the bill provides that the existing total capitalization shall not be reduced below the lower of either the investment in the property or the physical valuation as previously determined by the commission under section 19a."

In order to carry out the statutory policy of having fixed interest charges reduced in reorganization proceedings, the report explained, the bill further provides that any excess of existing capitalization over the "capitalizable value" found by the commission under subsection (e) shall be represented by no-par common stock at the rate of one share for each $100 of such excess. "The purpose of this is to afford to the existing stockholders and junior security holders a continued interest in the property. This no-par common stock will still represent actual investment in the property and will still represent a value which the commission itself has determined under section 19a. It will in no sense be a speculative medium."

Delay Preferred to Confiscation—The bill requires application of its provisions to pending reorganization proceedings, provided the property has not been turned over to a new corporation or turned back to the debtor company, or a reorganization plan has not been accepted by vote of the required percentage of creditors. While the committee did not believe that much, if any, delay in conclusion of proceedings would result from this requirement, as the standards of measurement are already available and usually of record, it held that "delay, however, would be preferable to confiscation."

The recommendation of the bill was accompanied by the comment that: "Certainly the present prices of railroad stocks, which are discouragingly low in spite of very high earnings, indicate that no new financing can be done through the medium of common stock until something has been accomplished toward the restoration of railroad credit. Particularly is this true in the case of the reorganized railroads whose preferred and common stocks are being traded in on a when-issued basis at far below par, generally around 35 or 40 for new preferred stocks, and 15 to 20 for new common stocks. This in itself is a commentary on the public regard in which railroad stocks are held. Just emerging from reorganization after years of careful consideration by the commission and in a time of rare prosperity, the natural expectation would be that all of the new securities would bring par.

"As it is now, the only way for the reorganized roads to finance their necessary capital requirements, which we are advised will be heavy after the war, is to issue first mortgage bonds to provide funds, and this will lead back to the evils which section 77 was designed to prevent. The current prices of the new junior securities about to be issued under the commission's plan indicate that future investment therein has been discouraged by what has happened to the present holders of existing issues."

Asks I. C. C. to Deny Short Lines' Per Diem Petition

The Association of American Railroads has asked the Interstate Commerce Commission to deny the recent petition of the American Short Line Railroad Association which complained of the increase from $1 to $1.15 in the freight car per diem rate and asked for a commission investigation of the reasonableness of charges for the use of freight cars. The increase became effective February 1; the Short Line Association's petition was noted in the *Railway Age* of January 20, page 206.

The A. A. R. reply, filed by its general solicitor, J. M. Souby, states that the investigation sought "would necessarily require the attention for an extended time of important railroad officers whose services are most urgently needed in the discharge of their regular duties." It is pointed out that the increase was agreed upon by railroads representing "the great bulk" of the country's mileage. Moreover, it is contended that the matter is not one which appears to be of "paramount public concern," and that only matters which are of such moment should be permitted now to divert railroad officers from their regular work.

The petition goes on to say that the application of the per diem rate to short line railroads is negligible as compared with its

application to Class I roads. It also points out that much per diem expense accruing against short lines is absorbed by their trunk line connections. In view of increases in labor and material costs, the higher rate is called not unwarranted in view of the fact that the $1 rate was approved by the commission in 1925 on the basis of that year's level of costs.

Mr. Souby also commented on the Short Line Association's contention that appointment by the A. A. R. of a committee to review the results under the new rate was an indication of uncertainty as to the studies on which the increase was based. There is, he said, "as much reason to believe that that action by the board was prompted by doubt as to the adequacy of the increase as there is to assume that it was prompted by doubt whether an increase as great as 15 per cent was justified." He added that the studies on the basis of which the board did act indicated that the average cost of car ownership is now "far in excess of $1.15 per day."

The A. A. R. also disputed the contention that the increase is "contrary to the trend of the times." It questioned the validity of comparisons with the trend of mileage rates on private cars, adding, however, that "as a matter of fact" the increased mileage of railroad-owned cars makes the $1.15 rate cheaper on a mileage basis than the $1 rate was in 1925.

Also questioned is the Short Line Association's statement that "there is evidence to the effect that the average cost of maintaining freight cars has been reduced and that the capital charges against car ownership have decreased" since the $1 rate was first established. In this connection Mr. Souby complains that "the petition does not indicate the nature of the evidence to which it refers." He adds that it is "a matter of common knowledge" that labor and material costs for both maintenance and construction "are now much higher than they have been at any time during the period the $1 per diem rate has been in effect."

N. Y. R. R. Club to Hear of Tour of Western Front

Duncan W. Fraser, president, American Locomotive Company, and one of six leading industrialists who recently toured the western front at the invitation of Lt. Gen. Brehon H. Somervell, chief of the Army Service Forces, will relate his experiences and observations on the battlefront, at the next meeting of the New York Railroad Club, February 15. The address will begin at 7:45 p.m., in the Engineering Societies auditorium, 33 West Thirty-ninth street.

Seek Tax Exemption for Pensions in Canada

The joint legislative committee of the railway transportation brotherhoods in Canada has asked the Royal Commission on Annuities to recommend exemption on income from pensions up to $100 a month.

The railway brotherhoods' brief stated that the Canadian Pacific had 5,858 pensioners with an average pension of $57 a month and the Canadian National 7,454 pensioners averaging $44 a month.

During the war period wages had been increased by cost-of-living bonuses or rate increases as compensation for increased living costs, but there had been no change in the pension rates, making the high taxation an added burden. Railway pensions in the U. S. are exempt from income taxes.

Club Meetings

The February 21 dinner of the New York Traffic Club, previously announced, has been canceled, in line with War Mobilization Director Byrne's recent "request" for a cessation of conventions, group meetings and the like "not necessary in the war effort."

Emergency Board Appointed

The White House announced on February 7 that President Roosevelt had appointed an emergency board to investigate a dispute between the Kentucky & Indiana Terminal and its employees represented by the Brotherhood of Railroad Trainmen. The dispute involves the application of awards of the National Railroad Adjustment Board.

Members of the emergency board are: Ernest M. Tipton, judge of the Missouri Supreme Court; Brigadier General H .S. Hawkins, retired; and Arthur E. Whittemore, Boston, Mass., attorney.

High Court Asks Enlightenment in Liability Cases

The Supreme Court of the United States on February 5 announced action in two related Federal Employers' Liability Act cases in which Justice Black, dissenting from the majority opinion, saw "far-reaching implications." The cases were *Herb vs. Wabash* and *Belcher vs. Louisville & Nashville*. The majority opinion was delivered by Justice Jackson. Justices Douglas and Murphy joined in the dissent, while Justice Rutledge concurred with it in part, adding further objections to the majority view.

The majority did not deliver a final decision, but continued the cases to enable counsel to apply to the Illinois Supreme Court, from which the appeal was taken, for a certificate to show whether that court intended to rest its judgment therein "on an adequate and independent state ground" or whether its decision involved the "federal question" of when the cases were commenced (in the statutory sense).

The Law's Delay—Herb's case was an action for damages following injuries suffered in 1936. The employee sued in an Illinois city court, and was awarded damages by the jury, but the judge set aside the verdict. This action was reversed by the appellate court, but the state supreme court reversed that decision and remanded the case to the city court to pass upon a motion for a new trial. Thus, said Justice Black, "although five years had already elapsed since Herb's injuries his efforts to secure a judicial determination of his rights under federal law had just begun."

At this point the state supreme court handed down decisions in two other cases to the effect that city courts did not have jurisdiction to hear and determine actions for injuries which occurred outside their territorial limits. The employee then moved for a change of venue to the circuit court, as authorized by a state law. The motion was granted, but in the circuit court the railroad motion to dismiss the case was sustained. Herb then appealed to the state supreme court, and that court's affirmation of the circuit court's action ultimately reached the Supreme Court of the United States.

The railroad's contentions in the circuit court were, first, that all of the city court's orders in the case, including the change of venue, were invalid, since it lacked jurisdiction either to hear or to transfer the case; second, that the statute authorizing change of venue was unconstitutional; and third, that the suit was not "commenced" within 2 years after the date of the injury, as required by section 6 of the Employers' Liability Act.

A State or Federal Question—The state supreme court did not pass on the question of constitutionality. The Supreme Court's majority, however, was unable to determine whether the state supreme court, in affirming the appellate court, decided the matter on the "state question," that is, whether the state courts had taken jurisdiction, or on the "federal question," that is, whether the action was barred by section 6 of the act. If the state court's decision was based on "adequate and independent state grounds," it would not be subject to Supreme Court review, Justice Jackson pointed out. But if the Supreme Court's jurisdiction is "conjectural" it is proper for it to wait for the state court to say "whether a federal question, and if so, what federal question, was decided."

Justice Black "would not thus lightly abdicate our ultimate responsibility to protect federally created rights." He observed that the "only reason" why the circuit court could dismiss the suit, under the state supreme court's view, was section 6's requirement that the suit be "commenced" within 2 years. Having construed "commenced" as meaning not only that a suit must be filed within 2 years of the injury, but that it must be filed in a court having jurisdiction to hear and determine the cause, the state supreme court, said the dissenting justice, proceeded to decide the "federal question" when it ruled that action had not been "commenced" within the statutory limit.

Their Day in Court—Justice Black held further that the employee claimed damages for alleged violation of the Federal Safety Appliance Act, which "contains no statute of limitation." But he was more concerned with the interpretation of "commenced." The railroads, he said, evidently thought the suit had "commenced" when they contested it in "all the courts of Illinois." The state courts had no doubt that the suit had "commenced" at the time they remanded it to the city court, he continued. And he felt that "the plainest principles of justice demand that these employees be afforded a trial. No reason that can be conceived for erecting a statutory bar of two years justifies an inference that Congress intended that employees who made bona fide efforts to prosecute their claims in a court should be barred because of unanticipated decisions as to jurisdiction. The

words of the statute justify the construction that these actions were 'commenced' when they were filed in the city courts. Any other construction results in a frustration of the broad objectives of the act."

The Belcher case had a similar career through the courts, though the original suit in the city court was instituted somewhat later, as the injury on which it was based was sustained in 1939. Justice Black was of the opinion that, even more clearly than in the Herb case, the state supreme court here had rested its action "squarely" on section 6. "Notwithstanding this," he added, "the court now, six years after Belcher's injuries, delays a final decision on the applicability of the federal act to await a statement from the state court as to whether it would have decided it on a hypothetical state ground had that ground been considered by it in the first instance."

The effect of the majority opinion would be to allow the state court decision to stand if based on the "state question," it appeared, but the Supreme Court would have an opportunity to review the decision if the state court should certify that it was based on the 2-year limitation clause in the federal statute.

Freight Permit Case Draws Close I. C. C. Vote

The Interstate Commerce Commission had to call for the vote of Commissioner Johnson, director of the Office of Defense Transportation, to reach a recent decision denying the application of Carloader Corporation for a permit authorizing it to perform a domestic forwarding service from New York to points in Texas and Oklahoma. The commissions's six-to-five decision came in a report on argument and reconsideration in the No. FF-122 proceeding.

In the original report by Division 4 the applicant, a subsidiary of United States Navigation Company, Inc., was granted a permit authorizing until December 31, 1945, operations as a forwarder of commodities generally when consigned for export, from New York and Philadelphia, Pa., to south Atlantic and Gulf of Mexico ports. Other phases of the original application were denied, and Carloader's petition for reconsideration was concerned with the denial of a permit authorizing the domestic service from New York to Texas and Oklahoma.

The majority report stated that the applicant, whose principal business is that of a foreign freight forwarder, has not recently been conducting any domestic service; and it cited evidence that the solicitation of domestic business had been discontinued. All of which, as the report put it, "tends to establish, if anything, that such service is not desired by the public interest." The majority went on to assert that Part IV of the Interstate Commerce Act "affirmatively places the burden of proving that its proposed service will be consistent with the public interest and the national transportation policy upon applicant and this record contains no evidence upon which such finding can be made."

Five Dissenters—Dissenting expressions came from Commissioners Aitchison and Alldredge, with Commissioner Splawn joining in the former and Commissioner Lee subscribing to the Alldredge views. The dissent of Commissioner Patterson was noted.

Commissioner Aitchison stated that there was no warrant for majority's conclusion that the applicant's failure to show a public need or desire for the service was fatal to the application. "The act requires no such showing," he added; and it was his view that the commission "must issue a permit to a properly qualified applicant if the proposed service is, or will be, consistent with the public interest and the national transportation policy." Mr. Aitchison found "no hint in the record" that the proposed service might have any adverse effect on the public interest or interfere with the national policy, except that it might increase competition which protesting freight forwarders have to meet. And denial solely on that ground "is specifically prohibited by section 410(d)."

Commissioner Alldredge thought the majority report was "too strict in its interpretation of applicant's evidence." He pointed out that there is no "grandfather clause" in Part IV, and "no requirement that applicant prove a continuity of service before it is entitled to a permit." He also noted how the applicant, during the war period, has concentrated on aiding in the dispatch of export traffic, adding that denial of the permit "will have the effect of penalizing applicant for temporarily turning its attention to war activities."

War-Built Pipe Lines Will Retain Business

(*Continued from page 313*)

The total cost including taxes and return on investment is put at 1.06 cents per ton-mile for crude oil, and 1.12 cents for gasoline. An over-all figure (both crude and refined) of 1.56 mills per ton-mile is given for pipe-line operating expenses including depreciation, the total cost figure being 2.42 mills. Post-war tankers, according to the table, will incur operating expenses of 0.49 mills per ton-mile on crude oil and 0.46 mills on gasoline; their total costs will be 0.63 mills and 0.6 mills, respectively. The over-all operating expense figure for post-war barges is estimated at 0.74 mills per ton-mile, the total-cost estimate being 0.92 mills.

Truck Costs High—"It is clear," the report continues, "that the cheapest facility for shipping petroleum before the war was the tank-ship, followed in order of increasing cost by barge, pipe line and tank car. Truck costs exceed rail costs for longer hauls. So far as can be seen, with the exception of the 24-inch War Emergency Line ("Big Inch"), this general cost relationship as between the various carriers is likely to remain in the future. . . . One may expect, therefore, that with the return of a full fleet of tank ships to domestic service, there will be an excess of transportation facilities for the movement of oil. The choice of facilities will most likely be determined largely by relative costs. Service consideration as to speed are relatively unimportant. The carrier or combination of carriers, which can deliver oil at the least cost will probably get the traffic."

The report then proceeds to look into the post-war prospects for the various war-built pipe lines. Its prediction of a reasonably bright future for Southeastern and Plantation has already been noted. It also predicts that "Big Inch," the 24-inch crude-oil line from Longview, Tex., to the New York and Philadelphia areas, will be able to stay in business, although there is some hedging on that prediction. "Big Inch" costs of operation compare favorably with tanker costs, but there is "greater flexibility" in tanker operations. Thus the pipe line's fate may be tied up with oil-company transportation policies, i. e., how its advantages are appraised in relation to the advantages of tanker service. One factor influencing such a decision may be the prices the government will ask for the pipe lines and tankers.

Will Govt. Retire?—In the latter connection, the report adds, that government policy will be "an important factor" in determining the disposition of all pipe lines financed by government funds. And "it cannot be predicted at this time how rapidly or to what extent the government will eliminate itself from manufacturing, transportation and other business activities."

With respect to "Little Inch," the 16-inch and 20-inch refined products line from the Houston-Beaumont area in Texas to Linden, N. J., the report cites its cost estimates which "clearly imply" that this line "will not be able to compete with the new tankers for refined oil traffic to the Atlantic seaboard." But here again, the disposition of the line "will be influenced by the attitude of the oil industry and ultimately by government policy. If the capital costs are reduced (i. e., if the government sells cheap) and the load factor is high, the pipe line may be able to operate to the East coast in competition with tankers."

The report discusses possible use of "Big Inch" and "Little Inch" for petroleum transportation services different from those in which they are now engaged, but does not find the prospects too bright. Discussions similar to its comment on these two big lines are included with respect to various others built during the war. It is pointed out that all but six of the new lines "are privately owned and operated and nearly all will continue in operation after the war." It is also predicted that "the large number of new oil barges, tugboats and towboats will stimulate the transportation of oil by these facilities on our inland, coastal, and intracoastal waterways."

Conflicting Rules Contribute to 3-Train Collision

The Interstate Commerce Commission, in a report prepared under the supervision of Commissioner Patterson, has recommended that the operating officers of Potomac Yard "prescribe adequate rules for operation of trains and engines" in the yard, as a result of an accident December 12, 1944, which was caused, according to the report, by failure to provide such rules.

Potomac Yard, located between Washington, D. C., and Alexandria, Va., is operated jointly by the Richmond, Fredericksburg & Potomac; Southern; Baltimore &

Ohio; Pennsylvania; and Chesapeake & Ohio. The accident occurred near the north end of the yard, where a track designated as the southward freight running track diverges from, and runs parallel to, the double-track main line of the R. F. & P., over which passenger trains of the Southern are operated in and out of Washington under agreement. This southward freight running track is customarily used by B. & O. and P. R. R. trains entering the north end of a freight classification yard which is about 1½ miles south.

Movements from the main track into the freight running track were governed by signal indications controlled at the adjacent RO interlocking. Operations with the current of traffic on the main tracks were controlled by automatic block signal and train control systems, but the Southern's locomotives were not equipped with train control apparatus.

It was dark and snowing when the accident occurred. Extra 4818 South, a 40-car P. R. R. freight, entered the southward freight track and stopped about 6:57 a.m. with its rear end 2,372 ft. south of RO tower. Extra 4493 South, a 36-car B. & O. freight,entered the southward freight track at about 7:05 a.m. and one min. later, while traveling about 15 m.p.h., it struck the rear of the preceding train. The caboose and rear car of the Pennsylvania freight were demolished and the engine and first car of the B. & O. freight were derailed, fouling both main tracks.

When the engineer of the B. & O. train recovered from the shock of the collision, he proceeded to a telephone about 540 ft. south and instructed the operator at RO tower to hold all trains. The most southerly signal by which that operator could display stop was located 2,048 ft. north of the wreckage. The next open office to the south, which was about 5 miles to the south of the scene of the accident, was notified, but a northbound 10-car Southern passenger train, No. 232, already had passed that office.

All the flagging facilities on the P. R .R. caboose and B. & O. engine were lost in the collision. In escaping, the P. R. R. flagman had lost his lantern. The fireman and front brakeman of the B. & O. train were too badly injured to furnish flag protection. The P. R. R. conductor and front brakeman were proceeding to the rear of their train when they discovered that the main tracks were fouled. By this time the northbound passenger was approaching at about 45 m.p.h. in territory where the maximum authorized speed was 70 m.p.h. The P. R. R. employees gave stop signals with white lanterns, but these apparently were not seen, and the Southern train struck the derailed B. & O. locomotive. The Southern engine and first four cars (1 mail car, 1 passenger-baggage car, and 2 coaches) were derailed and damaged. In the two collisions 1 employee was killed and 6 passengers, 3 mail clerks and 3 employees were injured.

Both freight trains had entered the freight runnning track under authority of a red-over-yellow-over-red signal aspect, indicating proceed at authorized speed. No definite rules for operation in Potomac Yard had been prescribed. The employees of each road were operating as if on similar tracks of their own roads, and the supervisory officers interpreted the rules as did the men. Thus, the crew of the P. R. R. train was operating prepared to stop short of a train or obstruction, and was not required to provide flag protection for following movements. The B. & O. rules for such circumstances limited train speeds to 15 m.p.h. and required protection for following movements, so the engineer of that road's train was expecting flag protection to enable him to stop short of a preceding train. The trains were only about 200 ft. apart, however, when he saw the caboose ahead and a lighted red fusee which the P. R. R. flagman was displaying, and the train could not be stopped in time to avoid the collision.

The commission's report commented: "If a proper method of operation governing movements on the tracks of Potomac Yard had been prescribed, and if the employees concerned had been properly instructed concerning the method of operation, this accident could have been averted."

Loud Speaker for Wreck Master

As an experiment in overcoming the difficulty of indicating crane movements by a code of whistle and hand signals, the Jersey Central has installed on a wrecking train a public address system which amplifies and directs the wreck master's voice to the work location and also to the crane operator.

The wreck master talks into a microphone on the end of a 150-ft. cord and his voice is amplified by a horn-type loud speaker mounted on the boom of the crane. A second smaller speaker in the cab transmits his voice to the crane operator.

The equipment used consists of a 20-watt amplifier at the base of the boom, a University PH horn equipped with a 15-watt S. A. H. driving unit on the boom and a Utah TW8 speaker in the cab. The crane operator also may speak into the address system by means of a push-to-talk microphone located in the cab. Depression of the button cuts the microphone into service and cuts out the speaker in the cab. Power for operation of the system is supplied by a 32-volt d. c. turbo-generator set. An inverter operating from this set supplies 110-volt 60-cycle current to the amplifier.

Senate-Approved Rivers Bill Gets House Committee O. K.

The House committee on rivers and harbors on February 6 voted to report to the House the Senate-approved rivers and harbors bill without change. As noted in the *Railway Age* of February 3, page 282, the bill, S.35, which would authorize projects estimated to cost a total of $381,968,332, was passed by the Senate on January 28.

The House committee's favorable report was adopted with one dissenting vote—that of Representative Rankin, Democrat of Mississippi, who objected to the committee's failure to add the $66,000,000 Tennessee-Tombigbee project and reserved the right to file a minority report in that conjunction. The bill as now framed was designed to avoid such controversial projects as Tombigbee.

Equipment and Supplies

LOCOMOTIVES

The New York Central has ordered 25 coal-fired steam locomotives of not less than 6,000 hp. each for delivery this year from the American Locomotive Company. These engines will be substantially the same as the experimental 4-8-4 type locomotive now being built for the railroad by the American Locomotive Company, the principal difference being in the use of a modified trailer truck, permitting further increase in ash pan volume. The new locomotives will have extra large tenders designed to carry 46 tons of coal and 18,000 gal. of water.

SIGNALING

The Chicago, Burlington & Quincy has placed an order with the Union Switch & Signal Company for materials to install remote control facilities at Thirty-eighth street, Denver, Colo. The order includes a style C control machine with style H-2 searchlight high and dwarf signals, style M22-B switch machines, style SL-6 electric switch locks, rectifiers, transformers, and relays. The installation work will be done by the railroad forces.

The Chesapeake & Ohio has placed an order with the Union Switch & Signal Company for the signal materials involved in the installation of absolute permissive automatic block signaling on 125 miles of single track in the territory between Ashland, Ky., and Lexington. The order includes color-light style R-2 high signals, style N-2 dwarf signals, relays, rectifiers, switch circuit controllers, style SL-21 electric switch locks, and instrument housings. The installation work will be done by railway forces.

FREIGHT CARS

The Pennsylvania is reported considering the acquisition of 500 50-ton box cars.

The Colorado & Wyoming is inquiring for 50 gondola cars of 70 tons' capacity.

The Illinois Terminal has ordered 50 53½-ft. flat cars of 50 tons' capacity from the American Car & Foundry Co.

The Chicago, Milwaukee, St. Paul & Pacific is reported to have received authorization to build 500 flat cars of 50 tons' capacity in the railroad's own shops.

The New York Central has ordered 1,000 gondola cars of 70 tons' capacity for the Pittsburgh & Lake Erie from Despatch Shops. The inquiry for this equipment was reported in the *Railway Age* of January 13.

Canadian National.—Aluminum is being used as an experiment for the roofing, siding, and doors of three of the 1,500 box

cars being built for the Canadian National by the National Steel Car Corporation. It is estimated that the change will reduce the weight of each car by 3,600 lb.

The FRUIT GROWERS EXPRESS COMPANY has ordered 300 40-ton refrigerator cars for delivery during the fourth quarter of 1945 from the Mount Vernon Car Manufacturing Company. The inquiry for this equipment was reported in the *Railway Age* of December 2.

The MISSOURI-KANSAS-TEXAS has received War Production Board authority to build 300 automobile box cars at a cost of approximately $1,500,000. M. S. Sloan, president, said the cars will be built in cooperation with the Office of Defense Transportation as the company's share of the 20,000 box cars that the railroads have been requested to purchase and place in service as soon as possible to take care of military demands. The cars will be constructed in the railroad's own shops at Denison, Tex., where 6,000 new and rebuilt cars are reported to have been turned out during the last four years.

Supply Trade

The San Francisco, Cal., office of the **Ohio Brass Company,** Mansfield, Ohio, has been moved to 582 Market street.

The **Morrison Railway Supply Corporation** has moved its Chicago office to 322 South Michigan avenue.

The **Leslie Company** has been awarded the Maritime "M" pennant and Victory Fleet flag for excellence in producing pressure regulator valves and typhon horns.

John J. Yezbak, head of the news bureau of the **Timken Roller Bearing Company,** Canton, Ohio, has been appointed also manager of public relations for the company.

Albert N. Williams, president of the Western Union Telegraph Company, has been elected a director of the **Westinghouse Air Brake Company** and of the **Union Switch & Signal Co.**

Norbert E. Smith, sales representative of the Chicago district sales office of the **Inland Steel Company** at Indianapolis, Ind., has been promoted to district sales manager in charge of the newly opened district sales office in Indianapolis.

Robert L. Fletcher, recently returned from five years overseas as a civilian engineer with the Army Engineers, has been appointed to the engineering staff of the **Timber Engineering Company,** Washington, D. C.

Louis McGuire, formerly manager and operating superintendent of an electric system in Tennessee, has been appointed sales engineer for the **Copperweld Steel Company,** Glassport, Pa., to cover the states of Tennessee, Mississippi and Alabama. Mr. McGuire will make his headquarters in Birmingham, Ala., and will be under the jurisdiction of Copperweld's Memphis, Tenn., office.

Everett B. Michaels, executive vice-president of the **Hyman-Michaels Company,** Chicago, has been elected president to succeed Sparrow E. Purdy, resigned.

Everett B. Michaels

W. J. Ross, vice-president, has been elected first vice-president; **Walter A. Newman,** has been elected vice-president and **Clarence W. Wolf** has been appointed assistant vice-president.

Mr. Michaels, who is the son of the co-founder and present chairman of the board, was born in 1903 and was graduated from the University of Michigan in 1923. Upon graduation, he entered the employ of Hyman-Michaels as a junior trader and, after holding various positions including that of vice-president, was elected executive vice-president in July, 1942.

A. L. McNeill has been appointed manager, Chicago district, of the **Okonite Company** and will direct the company's insulated wire and cable sales in the middle western territory extending from Ohio to the Rocky Mountains. Mr. McNeill

A. L. McNeill

was previously manager of the railroad department for this territory. He began his career with the Alton in 1900 and from 1908 to 1911 was chief clerk in the purchasing department. Following the temporary consolidation of the Alton, the Minneapolis & St. Louis, the Iowa Central and the Toledo, St. Louis & Western, he was appointed assistant purchasing agent for this group in 1911. He joined the Central Electric Company, Okonite's agent in Chicago, in 1913 and served as manager of railroad sales until 1925 when he joined the Okonite organization which established its own Chicago district office at that time. **E. H. McNeill,** formerly manager of the power and light department, has been appointed assistant manager, Chicago district, and **Harry D. Pierce** has been appointed office sales manager. Both A. L. McNeill and E. H. McNeill will continue to work with the railroads and public utilities.

Esty Foster, executive vice-president, has been elected president and a director of the **National Lock Washer Company,** Newark, N. J., to succeed **Cyrus H. Loutrel,** who became chairman of the board, a newly-created office. Mr. Foster joined the company as executive vice-president in May, 1944, from Ford, Bacon & Davis, Inc., engineers, of New York. For three years he had served in Washington on leave of absence as operations adviser and in other positions with the Office of Production Management, the War Production Board, and the combined Production and Resources Board. He was formerly a member of the faculty of the Graduate School of Business Administration, Harvard University, and a special engineer in the office of the assistant to the president and of the inspecting engineer of the New York Central. **Arthur W. Preikschat** and **Gilbert E. Webster,** vice-presidents, have been elected directors of the company.

OBITUARY

Eshelby F. Lunken, president of the **Lunkenheimer Company,** Cincinnati, Ohio, died January 25. He was 54 years of age. Mr. Lunken was connected with the Lunkenheimer Company for 35 years and had served as president for 26 years.

TRADE PUBLICATION

The Harco Steel Construction Co., Elizabeth, N. J., has issued a catalog describing masts and towers suitable for radio antennae, the mounting of lights, etc. Illustrated units, varying from 20 to 500 ft. in height, are characterized by being easy to erect. Types include guyed and self-supporting, square, triangular and tapered towers.

Construction

RAILWAY EXPRESS AGENCY.—This organization has awarded a contract, amounting to $144,500, to the George Isackson Company, Portland, Ore., for the construction of a two-story building to house express operations at Portland. Actual building will begin as soon as an old structure, now occupying the site, has been razed.

WESTERN PACIFIC. — This road has awarded a contract, amounting to $100,000,

to N. H. Sjoberg & Sons, Oakland, Cal., for the construction of a new division headquarters building at Sacramento, Cal. The structure will be a one-story building of reinforced concrete, 60-ft. wide by 110-ft. long, and will include all modern lighting and ventilation appointments.

Financial

AKRON, CANTON & YOUNGSTOWN.—*Reorganization Expenses.*—Division 4 of the Interstate Commerce Commission has fixed at $13,500 the maximum limit of final allowance to Squire, Sanders & Dempsey as compensation for services as counsel to the reorganization managers in connection with consummation of the plan of reorganization of this company and the Northern Ohio.

ALLEGHANY CORPORATION.—*Refunding.*—On February 3, the Alleghany Corporation announced that it had consummated a $28,335,000 eight-year bank loan with a group of 17 banks headed by the Chase National Bank of New York for the purpose of refunding its 3¼ per cent secured convertible notes due 1954, which have been called for redemption on March 5. The annual interest rate is 2½ per cent, excepting that where the loan may be secured by U. S. government securities the interest rate will be 1¼ per cent. The loan will be secured by approximately 1,098,000 shares of Chesapeake & Ohio common stock.

BEVIER & SOUTHERN.—*Lease.*—Division 4 of the Interstate Commerce Commission has authorized this road to operate under a 5-year lease a 6.1-mile extension of its line to the vicinity of Jacksonville, Mo., to afford access to newly developed coal mining properties of the Binkley Mining Co., owner of its capital stock and builder and lessor of the extension.

NEW YORK, CHICAGO & ST. LOUIS.—*Redemption Notice.*—The New York, Chicago & St. Louis has published notice of its intention to redeem on April 1, 1945, $26,058,000 of refunding mortgage 5½ gold bonds, series A, due April 1, 1974, at 107½ and accrued interest. (See previous item in *Railway Age* of December 23, page 977.)

PENNSYLVANIA.—*Equipment Trust Certificates.*—This road has applied to the Interstate Commerce Commission for authority to issue $6,000,000 of series P equipment trust certificates in connection with the acquisition of equipment to cost about $7,500,000, all of which is being built in company shops. Included in the purchase are 25 steam locomotives of the 4-4-6-4 type, costing about $220,000 each, and 500 50-ton box cars, ranging in cost from $3,900 to $5,000 each, depending on type.

WABASH.—*Refinancing.*—The Wabash has awarded its $47,000,000 of first mortgage bonds, series B, due February 1, 1971, to Halsey Stuart & Co. and associates on a bid of 98.38 for a 3¼ per cent coupon, a net interest cost to the railroad of 3.3436 per cent. The bonds were re-offered for sale to the public at 99⅝. Proceeds, together with other funds, will be applied to the redemption on April 1, 1945, of $47,354,300 of first mortgage 4 per cent bonds, series A, which were issued in 1942 in connection with the reorganization of the Wabash Railway Company, a predecessor of the present company. The company's request for bids was reported in the *Railway Age* of January 27, page 254.

Average Prices Stocks and Bonds

	Feb. 6	Last week	Last year
Average price of 20 representative railway stocks..	48.85	47.19	37.99
Average price of 20 representative railway bonds..	94.15	93.54	84.96

Dividends Declared

Chestnut Hill.—75¢, quarterly, payable March 5 to holders of record February 20.

Chicago Great Western.—5% preferred, 62½¢, payable March 30 to holders of record March 16.

Cincinnati Inter-Terminal. — 4% preferred, $2.00, semi-annually, payable February 1 to holders of record January 20.

Cleveland & Pittsburgh.—Special guaranteed, 50¢; regular stock, 87½¢, both quarterly, both payable March 1 to holders of record February 20.

Delaware & Hudson.—$1.00, payable March 20 to holders of record February 26.

Abandonments

MISSOURI PACIFIC.—Division 4 of the Interstate Commerce Commission has further postponed to September 1 the effective date of its certificate authorizing this road to abandon a branch from Sedalia, Mo., to Warsaw, 42 miles, reserving jurisdiction with respect to the protection of employees for 2 years from that date. The authorization was originally approved, as noted in *Railway Age* of February 19, 1944, page 407, over the opposition of the War Food Administration and other government agencies, on the ground that "in the past few years this railroad has been abandoned by the people who formerly utilized its services."

NEW YORK CENTRAL.—Division 4 of the Interstate Commerce Commission has reopened its Finance Docket No. 14003 proceeding, in which the Michigan Central and this company were authorized to abandon, and to abandon operation of, respectively, certain trackage, subject to a reservation of jurisdiction for 2 years with respect to the protection of employees affected. The case has been set for further hearing at a time to be designated, after the Railway Labor Executives Association had asked that conditions similar to those prescribed in the Burlington case be ordered. The carriers' reply was noted in this column in the January 27 issue.

PENNSYLVANIA.—This company has applied to the Interstate Commerce Commission for authority to abandon its 3.01-mile South Witmer branch at Irvona, Pa.

TEXAS & PACIFIC.—Division 4 of the Interstate Commerce Commission has considered the petition of the Railway Labor Executives Association in its Finance Docket 13981 proceeding, in which jurisdiction with respect to the protection of employees was reserved for 2 years in authorizing the abandonment of certain trackage by this road, and has extended its reservation of jurisdiction for an additional 2-year period. The R. L. E. A. had suggested that action in the event its petition to have the specific Burlington case provisions prescribed was not approved by the commission.

WABASH.—Division 4 of the Interstate Commerce Commission has authorized this road to abandon a branch from Helmer, Ind., to Stroh, 4.83 miles. An application for this authority was denied in February, 1943, without prejudice to its renewal one year thereafter if it could be shown that further operation could be continued only at a loss. Such showing was made by the carrier.

Railway Officers

EXECUTIVE

Willard F. Place's jurisdiction as vice-president, finance, of the New York Central System has been extended to include the system's treasury and accounting departments.

James S. Shaw, who has been on war leave from the American Express Company since 1942, serving as a lieutenant colonel in the Army Air Forces, has returned to the company and has been appointed assistant vice-president—sales department.

FINANCIAL, LEGAL AND ACCOUNTING

Henry C. Pribble, general claim agent of the Atchison, Topeka & Santa Fe, with headquarters at Topeka, Kan., has retired after 53 years of service.

C. G. Siegman, land and tax attorney of the New York, Chicago & St. Louis at Cleveland, Ohio, has been appointed general land and tax attorney with the same headquarters. **A. B. Montville,** safety and fire prevention agent at Cleveland, has been named land and tax attorney succeeding Mr. Siegman.

George Craig, assistant treasurer of the Lehigh Coal & Navigation Co. and its subsidiaries, including the Lehigh & New England Railroad, at Philadelphia, Pa., has been elected treasurer and assistant secretary with the same headquarters. **Glenn O. Kidd,** assistant secretary, has been elected secretary and assistant treasurer, and **Vernon T. Boyles** has been named assistant treasurer, also at Philadelphia.

Alfred E. Rietz, assistant Minnesota attorney of the Chicago & North Western, and general attorney of the Chicago, St. Paul, Minneapolis & Omaha (part of the North Western System), with headquarters at St. Paul, Minn., has been promoted to Minnesota attorney of the North Western, with the same headquarters. He will continue as general attorney of the C. St. P. M. & O. **Warren Newcome,** assistant

general solicitor of the North Western, with headquarters at St. Paul, has been transferred to Chicago.

E. M. Smith, whose appointment as assistant to the general counsel of the New York, Chicago & St. Louis at Cleveland,

E. M. Smith

Ohio, was announced in the *Railway Age* of December 9, 1944, was born at Chicago on June 7, 1891, and entered railroad service with the New York Central in the land and tax department on January 1, 1909. He joined the New York, Chicago & St. Louis as an attorney on July 15, 1917, and was named general land and tax attorney in September, 1923. In June, 1943, he was promoted to general attorney, the position he held at the time of his appointment as assistant to the general counsel.

Robert W. Purcell, whose appointment as general counsel of the Chesapeake & Ohio and of the New York, Chicago & St. Louis at Cleveland, Ohio, was announced in the December 2 issue of *Railway Age,* was born at Watertown, N. Y., and was graduated from Cornell University. After practicing law as an associate

Robert W. Purcell

of the New York law firm of White & Case, he served at Cleveland in the reorganization of various Van Sweringen properties from 1938 to 1943, when he became legal assistant to the deputy coal mines administrator at Washington, D. C. He returned to Cleveland shortly thereafter as acting general counsel of the Chesapeake & Ohio, the position he held at the time of his recent appointment as general counsel.

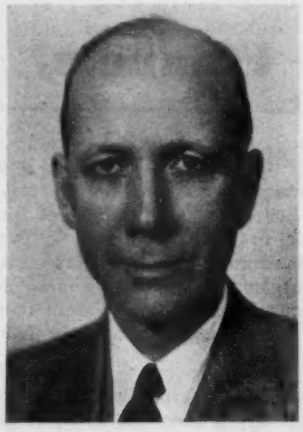
Walter A. Sarasin, whose promotion to freight claim agent of the Kansas City Southern and of the Louisiana & Arkansas, with headquarters at Kansas City, Mo., was reported in the *Railway Age* of January 20, was born at Argenta, Ark., on May 17, 1892, and is a graduate of the Neale Commercial College, Ft. Smith, Ark. He entered railway service in 1912 as a secretary on the Fort Smith & Western at Ft. Smith, and one year later he went with the Missouri & North Arkansas, where he held various positions in the freight claim department, with headquarters at Harrison, Ark. In 1917 Mr. Sarasin became traveling freight claim adjuster of the Texas & Pacific, with headquarters at Alexandria, La., and in 1918 he went with the Kansas City Southern as traveling freight claim agent, with headquarters at Shreveport, La. He later served as chief loss and damage investigator and on September 1, 1920, he was promoted to chief

Walter A. Sarasin

of the freight claim prevention department. In September, 1943, he was advanced to chief of the freight claim bureau, the position he held at the time of his new appointment.

Nye F. Morehouse, assistant general solicitor of the Chicago & North Western at Chicago, has been promoted to general solicitor, with the same headquarters, succeeding **Nelson J. Wilcox,** who has retired. **Lowell Hastings,** assistant general counsel, succeeds to the duties of Mr. Morehouse, but retains his original title. **Drennan J. Slater,** general attorney, has been advanced to assistant general solicitor, with headquarters as before at Chicago, and **F. O. Steadry** and **James B. O'Shaughnessy,** attorneys at Chicago, have been promoted to general attorneys, with the same headquarters.

Mr. Wilcox was born at Eau Claire, Wis., on January 27, 1875, and graduated from the University of Wisconsin College of Law in 1901. One year later he entered railway service as an attorney of the Chicago, St. Paul, Minneapolis & Omaha, with headquarters at St. Paul, Minn. In 1908 Mr. Wilcox went with the Chicago, Milwaukee & St. Paul (now the Chicago, Milwaukee, St. Paul & Pacific) as Minnesota attorney, with headquarters at Minneapolis, Minn., and in 1919 he resigned to become corporation attorney of the North Western, with headquarters at Chicago. One year later he was advanced to assistant general solicitor, with the same headquar-



Nye F. Morehouse

ters, and in July, 1942, he was promoted to the position he held at the time of his retirement.

Mr. Morehouse was born at Fremont, Neb., on April 3, 1889, and received his higher education at the University of Nebraska College of Law. On graduation he entered the practice of law at Omaha, Neb., and Fremont, until 1917 when he enlisted in the United States Army, serving until 1919 when he entered railway service as a general attorney of the North Western. In July, 1925, Mr. Morehouse was promoted to assistant general solicitor, with headquarters at Chicago, and in 1942 he was advanced to assistant general counsel at Chicago, the position he held until his new appointment as general solicitor.

Ralph S. Stephenson, comptroller of the Chicago Great Western at Chicago, has resigned to become assistant comptroller of the Chicago, Milwaukee, St. Paul &

Ralph S. Stephenson

Pacific, with the same headquarters, succeeding **W. C. Hannenberg,** whose death on January 13 was reported in the *Railway Age* of January 20. Mr. Stephenson was born at Oelwein, Iowa, on December 22, 1894, and entered railway service in July,

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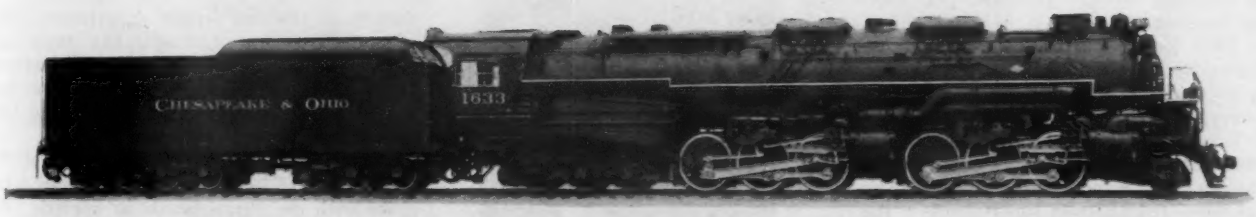
45 ALLEGHENY TYPE LIMAS



NOW SPEED C&O TRAFFIC
Over Tough Mountain Grades

IN 1940 the Chesapeake & Ohio ordered ten 2-6-6-6 Super-Power Limas, specially designed to haul heavy trains on tough mountain grades. So satisfactory did they prove, that the fleet of these powerful, four-cylinder, six-coupled articulated locomotives has been steadily increased until forty-five of them are now speeding C & O traffic over the Alleghenies.

LIMA LOCOMOTIVE WORKS — LIMA LOCOMOTIVE WORKS INCORPORATED — INCORPORATED, LIMA, OHIO

1912, as a timekeeper of the Oelwein Terminal division of the Great Western. He served in various clerical capacities until July, 1915, when he was appointed chief accountant at the Oelwein shops. He served in the United States Army during the first World War, being honorably discharged on May 14, 1919, as first sergeant, Company C, 13th Engineers (Railway). Mr. Stephenson returned to the Great Western as traveling accountant and in March, 1923, was transferred to the general accounting office as statistician. During the next few years, while so employed, he studied accounting and related subjects at Northwestern university, and in October, 1929, he was transferred to the president's office as chief statistician. In November, 1935, he went with the Milwaukee as special accountant in the finance and accounting department and was later promoted to statistician, assisting in reorganization matters and conducting special cost and other studies. In September, 1942, Mr. Stephenson was advanced to the position he held at the time of his resignation from Great Western service.

F. H. Thompson, whose appointment as superintendent of the real estate and conveyancing department of the Southern at Washington, D. C., was announced in the *Railway Age* of December 30, 1944, was born at Forest Glen, Md., on March 31, 1889, and graduated from Georgetown University. He entered railroad service as a stenographer in the real estate and conveyancing department of the Southern at Washington in 1911, and subsequently was promoted to secretary, conveyancer, and chief conveyancer. In March, 1941, he was appointed assistant superintendent, the position he held at the time of his recent promotion to superintendent.

OPERATING

M. M. Rudolph has been appointed assistant to the general manager of the Atlantic Coast Line at Wilmington, N. C.

D. R. Kirk, Sr., trainmaster of the Southern Pacific at Houston, Tex., has been promoted to assistant division superintendent, with the same headquarters.

H. H. Zeller, military transportation representative of the Chicago & Eastern Illinois at Chicago, has been promoted to superintendent of dining cars, with the same headquarters, succeeding **L. A. Stone,** who has retired.

E. H. Campbell has been appointed acting superintendent of the Kansas City Terminal division of the Missouri Pacific, with headquarters at Kansas City, Mo., succeeding **F. T. Mahoney,** who has been granted a leave of absence because of ill health.

J. E. Blackaller, superintendent of barge and ferry service of the Canadian National, with headquarters at Port Mann, B. C., has retired. The position of superintendent of barge and ferry service has been abolished and supervision of matters in that service will be handled by **G. A. McMillan,** superintendent of the Canadian National Steamships (a subsidiary of the Canadian National).

S. F. Lynch, whose promotion to general superintendent of transportation of the Illinois Central, with headquarters at Chicago, was reported in the *Railway Age* of January 27, was born at Jackson, Miss., on September 23, 1893, and attended St. Joseph's Academy at Jackson. He entered railway service on February 1, 1911, as a clerk in the mechanical department of the I. C., at Jackson, and on January 1, 1914, he was advanced to chief clerk to the master mechanic, with headquarters at McComb, Miss. A short time later he was transferred to the office of the division superintendent at Vicksburg, Miss., and in October, 1928, he was promoted to assistant trainmaster, with the same headquarters. Two years later Mr. Lynch was advanced to trainmaster at Vicksburg, and in October, 1931, he was appointed chief clerk to the superintendent, with the same headquarters. On February 1, 1932, he was promoted to trainmaster on the Springfield division, with headquarters at Freeport, Ill., and on June 1, 1939, he was appointed

S. F. Lynch

personnel agent at Chicago. On March 15, 1940, Mr. Lynch was advanced to office manager to the vice-president and general manager, with the same headquarters. In March, 1942, he was promoted to superintendent of transportation, the position he held at the time of his new appointment.

TRAFFIC

William P. Hansen, export freight agent of the New York Central at Chicago, has been promoted to foreign freight agent, with the same headquarters.

R. J. Tyner, commercial agent of the Kansas City Southern and of the Louisiana & Arkansas at Dallas, Tex., has been promoted to general agent, with headquarters at San Antonio, Tex.

Gerald E. Gustafson, western traffic manager of the New York, Ontario & Western at Chicago, has resigned to take a similar position with the Boston & Maine and the Maine Central, with the same headquarters.

B. E. Smeed, assistant general freight agent of the Minneapolis, St. Paul & Sault Ste. Marie at New York, has been appointed eastern general freight agent with the same headquarters. **A. J. O'Malley,** general agent at New York, has been transferred to Boston, Mass.

Milton G. Koon, district coal agent of the Pennsylvania at Chicago, has been promoted to coal freight agent, with the same headquarters. **Gordon W. Mikesell,** chief

Milton G. Koon

clerk of the coal freight department, with headquarters at Chicago, has been advanced to district coal agent at Detroit, Mich., succeeding **Leo J. Lynn,** who has been transferred to Chicago, replacing Mr. Koon.

Mr. Koon was born at Casnovia, Mich., and in June, 1905, he entered railway service with the Pennsylvania as a clerk. He subsequently held several other clerical positions until 1925 when he was promoted to district freight representative, with headquarters at Grand Rapids, Mich. In January, 1928, he was advanced to coal freight representative at Chicago, and in October of the same year he was promoted to the position he held at the time of his new appointment.

T. W. Hassell, district freight agent of the Southern at Chattanooga, Tenn., has been promoted to division freight agent with the same headquarters, and **E. B. Hyden,** commercial agent there, has been named to succeed him. **Venable L. Smith** has been appointed district freight agent at Richmond, Va.

W. P. Hickey, assistant general freight agent of the Seaboard Air Line at Charlotte, N. C., has been appointed assistant freight traffic manager at Savannah, Ga., succeeding **M. A. Calhoun,** deceased. **T. F. Sharpless,** district freight and passenger agent at Columbus, Ga., has been named assistant general freight agent there, and his former position has been abolished. **C. J. Mundee** has been appointed assistant general freight agent at Orlando, Fla., and the position of division freight agent there formerly held by Mr. Mundee has been abolished.

John S. Culpepper, whose appointment as assistant freight traffic manager of the Southern at Knoxville, Tenn., was announced in the *Railway Age* of December

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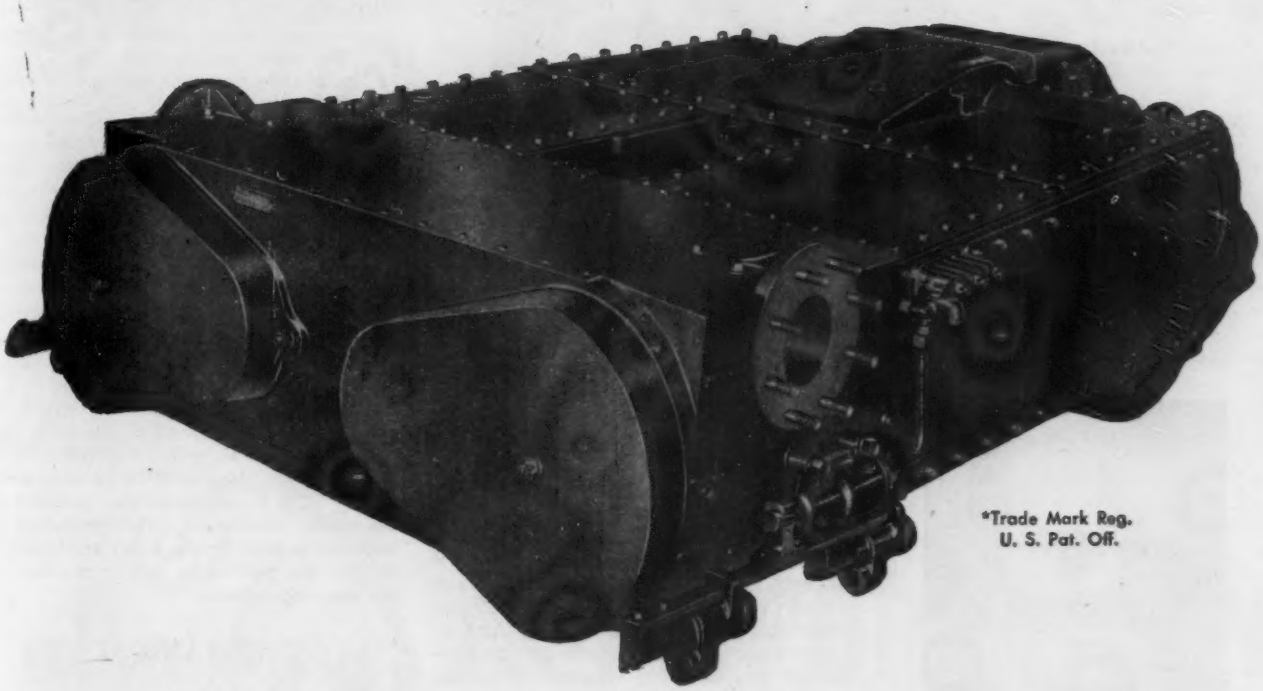
The TYPE "E" BOOSTER*



*Trade Mark Reg. U. S. Pat. Off.

A new Booster to meet new conditions

For today's increasingly exacting demands the Franklin Railway Supply Company, Inc., has developed a new Booster, which meets the requirements brought about by higher boiler pressures and new factors in current steam locomotive operation.

The short cut-off, the cast steel cylinders with large steam and exhaust passages, and a new design of ball joint, with self-adjusting packing, secure maximum efficiency and economy in the use of steam.

A special starting device enables the Booster to develop maximum starting effort, and a new air control permits engagement at higher speed. Other outstanding features include dynamic balancing and a roller bearing crank shaft, securely housed in the engine bed.

Every element in its construction is designed to increase the operating effectiveness of the Booster.

FRANKLIN RAILWAY SUPPLY COMPANY, INC.

NEW YORK • CHICAGO

In Canada: FRANKLIN RAILWAY SUPPLY COMPANY, LIMITED, MONTREAL

23, was born at Fort Valley, Ga., on June 6, 1901, and entered railroading with the Southern as a clerk in 1918. He was promoted to freight traffic representative at Jacksonville, Fla., in 1924, and transferred to Greenville, S. C., in 1926. He was named commercial agent there in 1931, remaining in that post until 1938, when he was advanced to division freight agent with the same headquarters. In 1943 he was appointed assistant general freight agent at Greenville, the position he held at the time of his recent promotion to assistant traffic manager.

James B. Duffy, assistant passenger traffic manager of the Atchison, Topeka & Santa Fe, with headquarters at Los Angeles, Cal., has retired. Mr. Duffy was born at Chicago on January 3, 1875, and was educated at private schools in San Francisco, Cal., graduating from Sacred Heart College in that city and then entering railway service in January, 1890, as an assistant ticket agent in the passenger department of the Santa Fe. For the following 18 years Mr. Duffy advanced through the positions of rate clerk in the general passenger office at San Francisco, chief

James B. Duffy

clerk at Prescott, Ariz., and at Albuquerque, N. M., passenger agent at San Jose, Cal., and city passenger agent at San Francisco. In 1908 he was promoted to general agent of the passenger department at that point. During federal control of the railroads he served as manager of the consolidated ticket office of the United States Railroad Administration at San Francisco. Mr. Duffy returned to the Santa Fe in March, 1920, and was appointed assistant general passenger agent at San Francisco, then being promoted to general passenger agent, with headquarters at Los Angeles, in February, 1922. On October 1, 1929, he was advanced to the position he held at the time of his retirement.

Alphie E. Johnston, general freight agent of the Pennsylvania at Chicago, has been promoted to assistant freight traffic manager, with the same headquarters, succeeding **Frederick W. Nash,** whose retirement after 52 years of service was reported in the *Railway Age* of January 6. **P. G. Barenbach,** assistant general freight agent, with headquarters at Philadelphia, Pa., has been advanced to general freight agent at Chicago, replacing Mr. Johnston, and **O. C. Grimshaw,** district freight agent at Altoona, Pa., has been promoted to assistant general freight agent at Philadelphia, relieving Mr. Barenbach.

Mr. Johnston was born at Cincinnati, Ohio, in 1890, and entered the service of the

Alphie E. Johnston

Pennsylvania in 1906 as a stenographer in the office of the division freight agent at Cincinnati. Later he held various clerical and secretarial positions in Pittsburgh, Pa., St. Louis, Mo., and Chicago. During the World War he served in the United States Army as first sergeant in the 80th Division Infantry, remaining in the service for nineteen months, ten of which he spent in France. He returned to the Pennsylvania at the close of the war and in 1929 was appointed division freight agent at Altoona, later serving in the same capacity at Richmond, Ind., and Ft. Wayne. He became assistant general freight agent at Pittsburgh on February 1, 1934, and in October, 1936, he was promoted to general freight agent, with headquarters at Chicago, the position he held at the time of his new appointment as assistant freight traffic manager.

George F. Ehlen, whose promotion to general freight agent of the Spokane, Port-

George F. Ehlen

land & Seattle, with headquarters at Portland, Ore., was reported in the *Railway Age* of January 27, was born at Minneapolis, Minn., on July 9, 1892, and entered railway service in April, 1911 as a warehouseman and baggageman of the Northern Pacific at Anoka, Minn. During World War I he served with the Army in France, returning to the Northern Pacific in 1919 as a clerk and baggageman at Anoka. In July, 1920, Mr. Ehlen went with the S. P. & S., as a revising clerk, with headquarters at Portland, serving in a number of minor capacities at that point until February, 1941, when he was promoted to general agent, with the same headquarters. On September 1, 1943, he was advanced to assistant to the general freight and passenger agent at Portland, and on May 16, 1944, he was promoted to assistant general freight agent, with the same headquarters, the position he held at the time of his new appointment.

Harvey H. Coleman, assistant general freight agent of the Detroit, Toledo & Ironton at Dearborn, Mich., has been promoted to general freight agent, with the same headquarters. The position of assistant general freight agent has been abolished. **Edward J. Murphy,** general agent, has been advanced to general eastern agent, with headquarters as before at Dearborn, and **D. M. Fishbeck,** acting general agent, has been promoted to general agent, succeeding Mr. Murphy.

Mr. Coleman entered railway service in 1910 as a clerk of the tariff bureau of the Michigan Central, with headquarters at Detroit, Mich. In July 1922, he went with the D. T. & I., where he was assigned to the traffiic department, being promoted to assistant general freight agent at Dearborn in 1932, the position he held at the time of his new appointment.

MECHANICAL

Edward C. Kaiser, general foreman of the Reading at Philadelphia, Pa., has been appointed superintendent of motive power of the Lehigh & New England at Pen Argyl, Pa., succeeding Hugh Ronalds, whose death on December 20, 1944, was reported in the *Railway Age* of December 30.

D. S. Neuhart, superintendent of motive power and machinery, eastern district, of the Union Pacific at Omaha, Neb., has been promoted to assistant general superintendent of motive power and machinery, with the same headquarters, a newly-created position. **J. R. Frohoff,** master mechanic of the Colorado division at Denver, Colo., has been advanced to superintendent of motive power and machinery of the northwestern district, with headquarters at Albina, Ore. **J. J. Daly,** master mechanic of the Nebraska division at Council Bluffs, Iowa, has been promoted to superintendent of motive power and machinery at Omaha, succeeding Mr. Neuhart, and **Oscar J. Robinson,** assistant master mechanic at Council Bluffs, has been advanced to master mechanic, relieving Mr. Daly. **James E. Gogerty,** general locomotive foreman at Cheyenne, Wyo., has been promoted to master mechanic, with headquarters at Denver, replacing Mr. Frohoff.

Edwin Grey Jones, whose appointment as superintendent of motive power of the Charleston & Western Carolina at Augusta, Ga., was announced in the *Railway Age*

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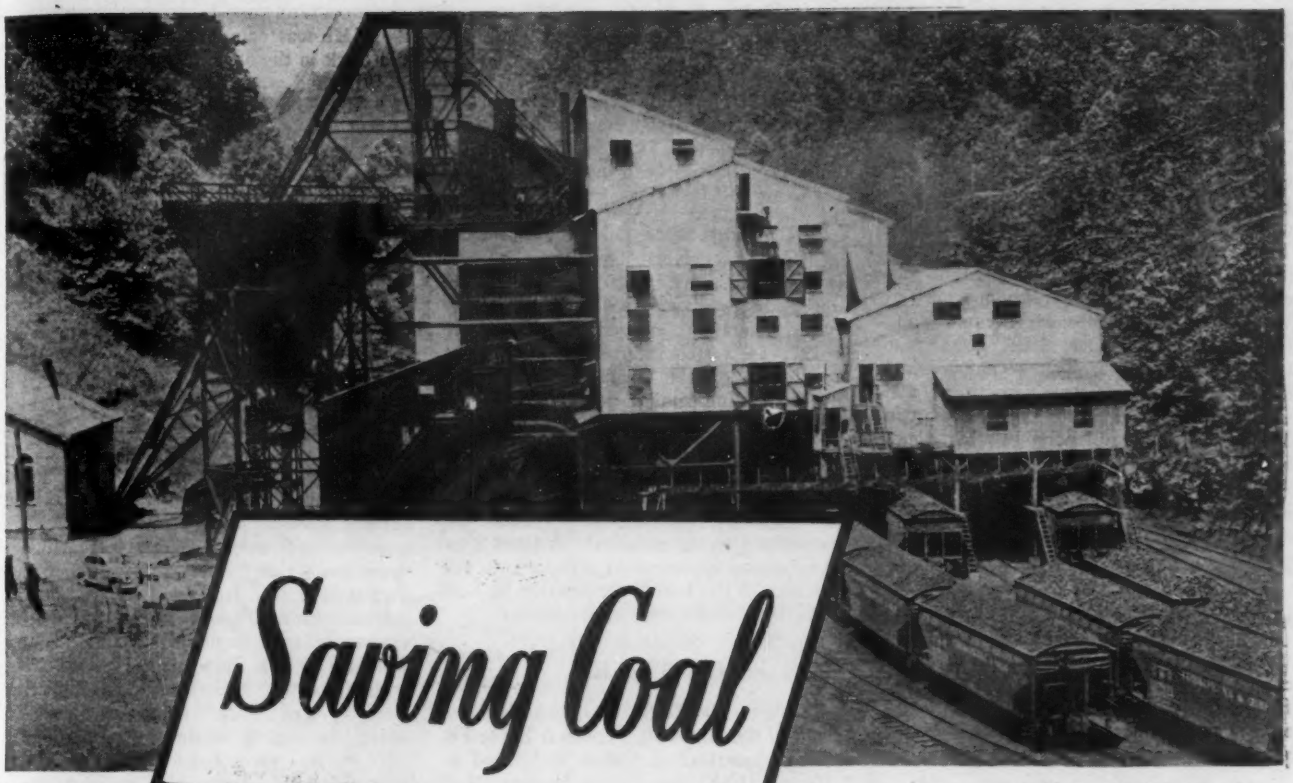

Saving Coal

Photograph Courtesy of Chesapeake & Ohio Railway Co.

also saves TRANSPORTATION

Fuel wastage is a two-fold loss; the fuel itself and the transportation necessary to haul it. Because of the strategic importance of fuel to the war program every effort must be made to conserve this vital material.

The fuel economy of Security Sectional Arches has been thoroughly proved in over 36 years of service on American railroads. But only a complete Arch can produce maximum fuel savings.

You need a full Arch for full fuel economy.

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Refractory Specialists

AMERICAN ARCH CO.
INCORPORATED
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Locomotive Combustion Specialists

of January 6, was born at Fayetteville, N. C., on March 31, 1902, and graduated from the George School of Technology and the North Carolina State College of Agriculture and Engineering. He entered railroading in July, 1925, as a special apprentice in the Emerson shops of the Atlantic Coast Line and served subsequently at various points as air brake machinist from June, 1927, to September, 1929, when he was promoted to plant engineer of the Tampa shops at Tampa, Fla. On November 1, 1933, he was named assistant mechanical instructor with headquarters at Waycross, Ga., where he became gang foreman in September, 1938. One year later he returned to Tampa as assistant foreman in the locomotive department, and was advanced to erecting shop foreman in March, 1941. The following July Mr. Jones became general foreman of the Tampa shops, the position he held at the time of his recent appointment as superintendent of motive power of the Charleston & Western Carolina.

ENGINEERING & SIGNALING

James W. Wiggins, principal assistant engineer of the Bangor & Aroostook at Houlton, Me., has been appointed assistant to the chief engineer of the Boston & Maine at Boston, Mass.

Clarence M. Segraves, bridge designer of the Delaware, Lackawanna & Western at Hoboken, N. J., has been named assistant engineer of structures with the same headquarters.

Thomas P. Watson, assistant engineer of the Pennsylvania's Central region at East Aurora, N. Y., has been appointed assistant to the chief engineer of the Central region at Pittsburgh, Pa., succeeding Donald L. Sommerville, whose promotion to chief engineer was announced in the *Railway Age* of November 4, 1944.

R. H. Morrison, bridge and building superintendent of the Bangor & Aroostook at Houlton, Me., has been promoted to principal assistant engineer with the same headquarters, succeeding **James W. Wiggins,** whose appointment as assistant to the chief engineer of the Boston & Maine is announced elsewhere in these columns. **C. E. Garcelon,** bridge and building inspector and part-time foreman, has been advanced to bridge and building superintendent at Houlton succeeding Mr. Morrison.

SPECIAL

I. H. Crabhill, inspector of police of the Southern at Washington, D. C., has been promoted to general supervisor, investigation and police department, with the same headquarters.

Theodore L. James, formerly president of the Rio Grande Motor Way (a subsidiary of the Denver & Rio Grande Western), with headquarters at Denver, Colo., has been elected president of the Burlington Transportation Company, Inc., (a subsidiary of the Chicago, Burlington & Quincy), with headquarters at Chicago. He succeeds **I. B. James,** who has resigned to become president of the All-American Bus Lines, Inc.

F. E. Gorman, assistant to the manager of personnel of the Southern Pacific at San Francisco, Cal., has been promoted to assistant manager of personnel, with the same headquarters, succeeding **William Wilkins,** who has been assigned to other duties.

M. R. Cring, whose promotion to director of publicity-advertising of the Missouri-Kansas-Texas, with headquarters at St. Louis, Mo., was reported in the *Railway Age* of January 6, entered railway service in 1922 as a stenographer in the freight department of the Pennsylvania, subsequently holding similar positions with the Norfolk & Western and the St. Louis-San Francisco. In 1925 Mr. Cring went with the M-K-T as assistant to the secretary to the president, with headquarters at St. Louis, and five years later he was promoted to secretary to the president. A short time later he was advanced to secretary to the chairman of the board, the position he held at the time of his new appointment.

OBITUARY

Chester Vandegrift, division storekeeper of the Atchison, Topeka & Sante Fe, with headquarters at Calwa, Cal., died in a Fresno (Cal.) hospital on January 23.

Andres Ortiz, general manager of the National Railways of Mexico, with headquarters at Mexico City, D. F., died at Boston, Mass., on January 18.

Herman J. Klein, who retired in 1933 as vice-president of the New York, Chicago & St. Louis, died at his home in Highland Park, Ill., on February 2.

J. P. Plunkett, general attorney of the Great Northern, with headquarters at St. Paul, Minn., died in a hospital in that city on January 27, following an emergency operation.

Charles S. Knapp, engineer of valuation of the Pullman Company, with headquarters at Chicago, died in a hospital in that city on January 30 after an illness of several weeks.

Thomas M. Durkin, assistant superintendent of dining and sleeping cars of the Chicago, Milwaukee, St. Paul & Pacific at Chicago, died at his home in that city on February 5, following a long illness.

E. F. Richardson, superintendent of motive power of the Bessemer & Lake Erie at Greenville, Pa., died there on February 3 after a brief illness. Mr. Richardson, who was 64 years old, was a native of Greenville, and had been employed in the mechanical department of the Bessemer & Lake Erie for 45 years.

Watson Gannaway Templeton, general manager of the Nashville, Chattanooga & St. Louis with headquarters at Nashville, Tenn., died at his home there on February 3. Mr. Templeton, who was born at Beach Grove, Tenn., on April 2, 1872, and attended Beach Grove College, entered railroad service with the Nashville, Chattanooga & St. Louis in June, 1893, as a telegraph operator, and became a dispatcher in 1901. He was named assistant trainmaster and clerk in the office of the superintendent in 1911, and was promoted to trainmaster in 1913. The following year he was advanced to superintendent of the Huntsville division at Tullahoma, Tenn., and transferred to the Nashville division at Nashville in 1916, remaining in that post until 1927, when he was appointed general manager there, the position he held at the time of his death.

James E. McQuillen, who retired in February, 1943, as mechanical superintendent of the Gulf, Colorado & Santa Fe (part of the Atchison, Topeka & Santa Fe System), with headquarters at Galveston, Tex., died in that city recently. Mr. McQuillen was born at Rochester, N. Y., on January 25, 1873, and attended the Sacred Heart Academy, Palestine, Tex. He entered railway service in October, 1887, with the International-Great Northern as a roundhouse caller, later serving as a machinist apprentice on the I.-G. N. and as machinist, foreman and general foreman in various railroad shops in the United States and Mexico. In September, 1901, he went with the G. C. & S. F. as a machinist at Temple, Tex., later being advanced to enginehouse gang foreman. In December, 1902, he was promoted to general foreman at Gainesville, Tex., and in November, 1906, he was advanced to master mechanic at Silsbee, Tex. In August, 1913, Mr. McQuillen was promoted to mechanical superintendent, with headquarters at Cleburne, Tex. His headquarters were later transferred to Galveston.

Herbert Harold Vreeland, chairman of the board of the Royal Typewriter Company, and long associated with the railroad industry, died on January 31 in Palm Beach, Fla. He was 89 years of age. Mr. Vreeland began his career at 18 as a gravel shoveler on a construction train on the Long Island, successively becoming track walker, switchman, freight brakeman, conductor and finally being assigned to the floating equipment department. He then went to work as a freight brakeman on the New York & Northern (New York Central) and was later promoted to passenger conductor, train master, superintendent and general manager. In 1893 he was elected president and general manager of the Houston, West Street & Pavonia (street railway). In 1906 he was appointed a member of the committee on transportation of the Interborough-Metropolitan Company, a holding company for the Interborough Rapid Transit Company, the Metropolitan Street Railway Company, and the Metropolitan Securities Company. Six years later he was appointed vice-president of the company, continuing in that capacity until 1919. From 1912 to 1928 he was associated with and managed the business interests of the late Thomas Fortune Ryan. At the time of his death, he was a director of numerous railroad and industrial corporations and a member of the board of governors of the Railroad Machinery Club of New York. He was also a charter member of the New York Railroad Club and its president from 1898 to 1908.

Table of Revenues and Expenses appears on second left-hand page

A BRIEF OF DEVICES

CONTRIBUTING TO THE SUCCESS AND EFFICIENCY OF THE MODERN LOCOMOTIVE

SUPERHEATER DESIGN – Small flues provide the maximum superheating and evaporating surfaces within a given boiler.

TYPE "H-A" SUPERHEATER UNITS – a design to provide for additional superheating surface and higher superheat to meet the necessity for improvement *in existing locomotives equipped with Type "A"* superheaters.

EXHAUST STEAM INJECTORS – a contact type of feedwater heater. Produces economies in fuel and water, or an increase in boiler capacity. Low in first cost and in maintenance cost.

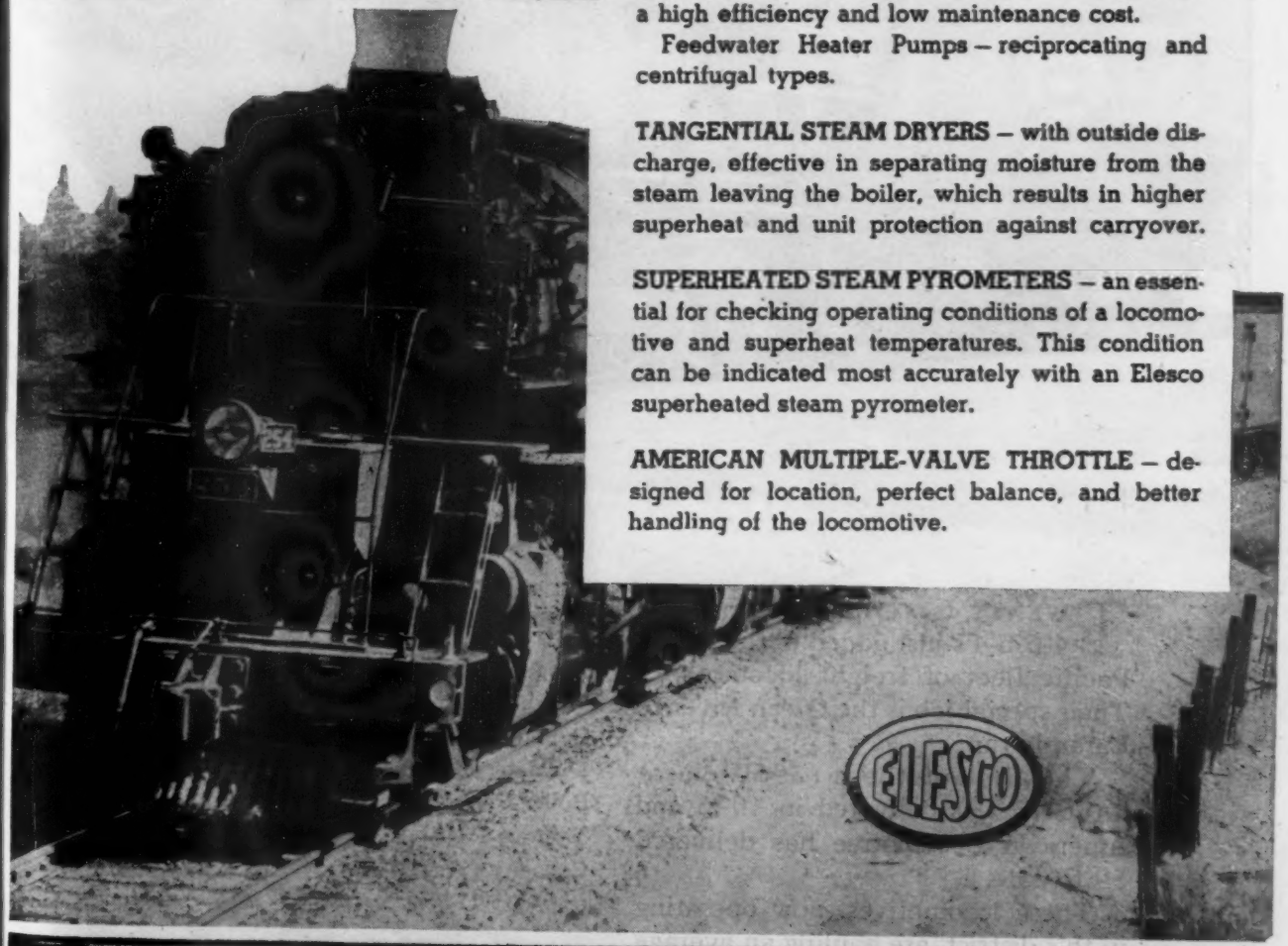
ELESCO FEEDWATER HEATERS – are efficient, dependable, using only one pump and a heater without moving parts. Heaters, of either tube bundle design or multiple coils, have demonstrated a high efficiency and low maintenance cost.

Feedwater Heater Pumps – reciprocating and centrifugal types.

TANGENTIAL STEAM DRYERS – with outside discharge, effective in separating moisture from the steam leaving the boiler, which results in higher superheat and unit protection against carryover.

SUPERHEATED STEAM PYROMETERS – an essential for checking operating conditions of a locomotive and superheat temperatures. This condition can be indicated most accurately with an Elesco superheated steam pyrometer.

AMERICAN MULTIPLE-VALVE THROTTLE – designed for location, perfect balance, and better handling of the locomotive.



SUPERHEATERS • FEEDWATER HEATERS
AMERICAN THROTTLES • STEAM DRYERS
EXHAUST STEAM INJECTORS • PYROMETERS

THE SUPERHEATER COMPANY

Representative of
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60 East 42nd Street, NEW YORK
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THE SUPERHEATER COMPANY, LTD.

LOCOMOTIVES THAT ARE MAKING HISTORY

TWENTY more new powerhouse 4-6-6-4's just added to the Union Pacific fleet of freight locomotives. Their special job is the Green River to Laramie run.

The first of these (3950 class) 4-6-6-4's was delivered in 1942 and American Locomotive has delivered 59 to date.

These locomotives, now operating in this district, are hauling an average of 250 tons more per train than those formerly used on this run. This is the equivalent of 800 train miles per day or a saving of one train in 13 for this territory.

Here are the "SPECS":

Weight on Drivers	406,200 lbs.
Weight of Engine	634,500 lbs.
Cylinders	21 x 32 ins.
Diameter of Drivers	69 ins.
Boiler Pressure	280 lbs.
Tractive Power	97,350 lbs.
Capacity (Water)	25,000 gals.
Capacity (Fuel)	28 tons

Locomotive designs developed by American Locomotive Company have been, are, and will continue to be powerful factors in American railroad operating efficiency and economy.

● ***Unsurpassed for the Job because Built for the Job***

American Locomotive

NEW YORK

REVENUES AND EXPENSES OF RAILWAYS

MONTH OF DECEMBER AND TWELVE MONTHS OF CALENDAR YEAR 1944

Name of road		Av. mileage operated during period	Operating revenues: Freight	Passenger	Total (inc. misc.)	Operating expenses: Maintenance of: Way and structures	Equipment	Traffic	Transportation	Total	Operating ratio	Net from railway operation	Operating income	Net railway operating income: 1944	1943
Akron, Canton & Youngstown	Dec.	171	$321,701	$172	$336,176	$87,036	$46,010	$19,968	$136,561	$310,750	92.4	$25,426	$5,063	$10,327	$43,764
	12 mos.	171	4,409,748	1,980	4,602,770	874,045	438,078	221,868	1,379,027	3,135,691	68.1	1,467,079	870,112	692,090	975,585
Alton	Dec.	959	2,136,527	803,893	3,373,117	373,973	531,866	75,285	1,120,284	2,245,353	66.6	1,127,764	740,148	499,358	260,634
	12 mos.	959	24,776,509	9,457,560	38,255,988	5,210,794	5,442,787	842,220	12,359,022	25,443,724	66.5	12,812,264	7,159,435	4,460,904	3,782,283
Atchison, Topeka & Santa Fe System	Dec.	13,092	30,961,747	8,834,768	43,046,378	6,039,931	7,409,820	605,617	13,650,514	28,379,765	65.9	14,666,613	6,536,974	5,803,951	6,429,672
	12 mos.	13,103	379,156,441	112,433,028	528,080,530	64,304,279	81,778,141	7,427,343	142,317,909	303,738,777	57.5	224,341,753	65,994,523	60,178,928	65,839,748
Atlanta & West Point	Dec.	93	275,139	160,003	480,894	37,374	58,369	10,869	196,652	323,892	67.4	157,002	75,202	35,517	29,111
	12 mos.	93	3,313,183	1,884,200	5,711,683	583,913	688,853	119,347	1,989,099	3,614,209	63.3	2,097,474	754,101	403,742	467,748
Western of Alabama	Dec.	133	257,225	163,238	457,242	53,059	65,711	10,748	183,710	330,526	72.3	126,716	42,613	34,462	46,786
	12 mos.	133	3,249,775	1,917,796	5,586,048	665,074	756,173	122,847	1,848,213	3,599,734	64.4	1,986,314	614,484	523,357	659,911
Atlanta, Birmingham & Coast	Dec.	639	572,902	78,585	697,868	128,045	106,662	32,140	362,331	651,941	93.4	45,927	52,536	18,304	5,127
	12 mos.	639	6,844,246	637,975	7,873,231	1,353,822	1,229,780	342,594	3,117,634	6,311,263	80.2	1,561,968	783,183	368,063	514,982
Atlantic Coast Line	Dec.	4,935	8,336,709	3,782,475	13,290,448	1,849,990	2,368,580	190,263	4,415,802	9,222,673	69.4	4,067,775	2,067,775	1,687,674	1,540,828
	12 mos.	4,960	100,630,379	44,954,478	155,946,298	15,321,433	24,828,311	2,186,659	46,683,980	93,834,279	60.2	62,112,019	18,112,019	13,672,457	15,704,857
Charleston & Western Carolina	Dec.	343	317,667	24,878	361,109	23,130	57,946	10,954	140,933	239,810	66.4	121,299	21,299	27,564	83,181
	12 mos.	343	4,305,041	156,530	4,572,500	598,736	717,475	122,934	1,456,036	2,976,086	65.1	1,596,414	711,414	712,397	800,097
Baltimore & Ohio	Dec.	6,141	22,648,003	4,356,014	28,731,538	6,335,000	6,925,000	565,000	12,190,000	27,345,000	95.2	1,386,538	1,998,600	1,090,800	—6,238,533
	12 mos.	6,143	314,418,567	51,308,473	386,122,372	58,412,479	78,367,529	6,089,862	130,760,100	286,908,238	74.3	99,214,134	51,313,026	41,521,591	52,167,469
Staten Island Rapid Transit	Dec.	24	306,498	117,622	432,693	212,838	72,606	1,277	120,692	487,075	112.6	—54,382	—40,819	—71,833	—33,808
	12 mos.	24	3,769,170	1,405,006	5,286,086	1,043,931	506,715	15,178	1,414,506	3,358,265	63.5	1,927,821	1,168,191	916,740	1,028,583
Bangor & Aroostook	Dec.	602	940,303	83,434	1,066,706	136,857	172,255	6,544	292,393	642,443	60.2	424,263	126,101	131,295	231,728
	12 mos.	602	8,582,323	947,073	10,024,676	1,567,685	1,509,479	75,383	2,514,281	6,065,812	60.5	3,958,864	1,220,891	1,455,316	1,790,160
Bessemer & Lake Erie	Dec.	214	753,240	3,606	771,152	141,684	741,857	13,261	303,881	1,242,018	161.1	—470,866	—867,194	—700,269	218,797
	12 mos.	214	19,369,485	24,100	19,561,182	1,746,139	8,812,549	163,817	4,080,855	15,299,468	78.2	4,261,714	1,291,547	3,381,684	2,600,905
Boston & Maine	Dec.	1,789	4,770,149	1,609,225	6,970,852	1,816,874	1,424,069	101,741	2,730,776	6,308,550	91.0	662,302	1,100,374	850,571	742,530
	12 mos.	1,815	60,205,568	19,532,662	87,342,286	14,632,787	15,118,324	967,597	31,893,484	65,505,531	75.0	21,836,755	13,337,968	10,094,131	11,877,358
Burlington, Rock Island	Dec.	228	145,608	51,468	214,999	35,857	20,632	3,017	94,639	168,313	78.3	46,686	36,977	888	—27,451
	12 mos.	228	2,084,800	728,299	2,999,841	362,151	307,539	37,843	1,030,309	1,915,297	63.8	1,084,544	966,482	548,093	533,501
Cambria & Indiana	Dec.	35	131,436	.....	131,507	17,339	58,732	956	29,929	118,191	89.87	13,316	—30,381	51,005	36,361
	12 mos.	35	1,807,082	.....	1,807,944	159,472	611,890	7,282	237,660	1,104,760	61.11	703,184	—290,122	652,469	575,069
Canadian Pacific Lines in Maine	Dec.	234	504,904	68,065	600,198	67,237	53,109	6,614	195,985	328,644	54.8	271,554	241,339	83,052	134,344
	12 mos.	234	4,856,148	952,691	6,154,465	830,940	835,436	78,979	1,957,707	3,831,759	62.3	2,322,706	2,047,791	1,178,484	2,168,500
Canadian Pacific Lines in Vermont	Dec.	90	89,410	22,492	123,757	32,651	9,769	2,400	92,479	139,293	112.6	—15,536	—34,721	—71,829	—119,236
	12 mos.	90	1,027,103	333,534	1,516,354	463,814	341,798	28,759	1,132,170	2,029,488	133.8	—513,134	—634,945	—1,029,904	—1,021,061
Central of Georgia	Dec.	1,815	2,188,557	736,367	3,211,244	332,191	594,779	67,199	1,281,419	2,416,368	75.2	794,876	548,406	497,647	—135,245
	12 mos.	1,815	26,817,770	8,734,307	38,987,759	5,007,821	6,277,752	846,008	14,275,386	28,093,516	72.1	10,894,243	7,117,201	6,397,292	7,345,556
Central of New Jersey	Dec.	654	3,867,745	594,882	4,763,877	2,002,831	1,003,369	54,591	2,041,986	5,296,221	111.2	—532,344	—575,439	—756,308	—473,766
	12 mos.	655	49,564,879	7,505,468	60,796,386	8,241,073	10,973,167	652,248	24,951,718	46,832,850	77.0	13,963,536	7,936,285	4,496,492	5,190,600
Central Vermont	Dec.	422	496,174	82,829	647,792	81,522	132,474	618	325,901	569,181	87.9	78,611	39,465	—4,102	117,378
	12 mos.	422	7,112,859	1,000,829	8,790,303	1,231,198	1,352,977	116,549	3,831,450	6,849,728	77.9	1,940,575	1,386,854	828,024	1,460,293
Chesapeake & Ohio	Dec.	3,076	12,882,463	1,927,881	15,409,211	2,501,801	3,863,850	307,430	4,914,278	12,251,750	79.5	3,157,461	1,639,967	2,090,165	2,945,929
	12 mos.	3,074	184,876,712	23,506,846	216,536,246	26,649,293	42,853,705	3,039,178	57,561,572	136,866,850	63.2	79,669,396	28,514,448	32,813,189	37,216,148
Chicago & Eastern Illinois	Dec.	912	1,690,301	636,325	2,565,175	273,932	452,325	67,393	1,031,613	2,009,831	78.4	555,344	403,182	227,906	—124,297
	12 mos.	912	23,673,952	7,587,440	34,109,588	4,210,594	5,341,883	787,184	12,124,450	23,848,211	69.9	10,261,377	5,861,546	2,930,241	3,397,266
Chicago & Illinois Midland	Dec.	131	502,204	1,821	544,378	12,748	88,699	24,860	145,758	300,079	55.1	244,299	90,126	97,876	79,194
	12 mos.	131	6,604,384	18,553	6,993,960	796,301	1,063,037	268,675	1,722,878	4,179,636	59.8	2,814,324	951,915	990,258	993,368
Chicago & North Western	Dec.	8,072	8,652,344	3,135,948	13,226,102	1,894,672	2,982,717	213,741	4,895,070	10,520,175	79.5	2,705,927	1,451,615	1,358,660	3,814,225
	12 mos.	8,084	113,303,978	37,291,003	166,966,117	22,011,670	30,791,896	2,878,307	56,216,457	117,930,666	70.6	49,035,451	23,463,663	23,086,701	40,791,747
Chicago, Burlington & Quincy	Dec.	8,987	14,936,219	3,439,856	20,045,773	2,641,530	3,626,555	293,935	5,499,369	12,443,814	62.1	7,601,959	7,484,569	7,119,142	—408,916
	12 mos.	8,989	180,453,652	40,141,385	240,637,400	40,175,260	33,790,768	3,450,556	61,653,940	145,854,303	60.6	94,783,097	37,592,460	32,074,823	35,762,487
Chicago Great Western	Dec.	1,500	1,941,435	199,035	2,372,137	184,711	283,485	64,839	1,008,006	1,625,031	68.5	747,106	646,044	471,755	180,135
	12 mos.	1,500	24,972,572	2,809,925	30,186,963	4,335,542	3,816,433	774,257	11,181,431	21,003,947	69.6	9,183,016	5,646,870	3,357,724	3,723,331
Chicago, Indianapolis & Louisville	Dec.	541	885,262	106,347	1,061,148	287,554	197,656	40,287	363,670	932,675	87.9	128,473	82,111	45,038	—275,602
	12 mos.	541	11,256,426	1,290,754	13,490,160	1,831,078	2,268,697	398,916	4,348,679	9,342,893	69.3	4,147,267	2,886,208	2,415,936	2,909,831

REVENUES AND EXPENSES OF RAILWAYS

Name of road		Av. mileage operated during period	Operating revenues: Freight	Passenger	Total (inc. misc.)	Operating expenses: Maintenance of Way and structures	Maintenance of Equipment	Traffic	Transportation	Total	Operating ratio	Net from railway operation	Operating income	Net railway operating income 1944	1943
Chicago, Indianapolis & Louisville	Dec.	541	885,262	106,347	1,061,148	287,554	197,656	40,287	363,670	932,675	87.9	128,473	82,111	45,038	—275,602
	12 mos.	541	11,256,426	1,290,754	13,490,160	1,831,078	2,268,697	398,916	4,348,679	9,342,893	69.3	4,147,267	2,886,208	2,415,936	2,909,831

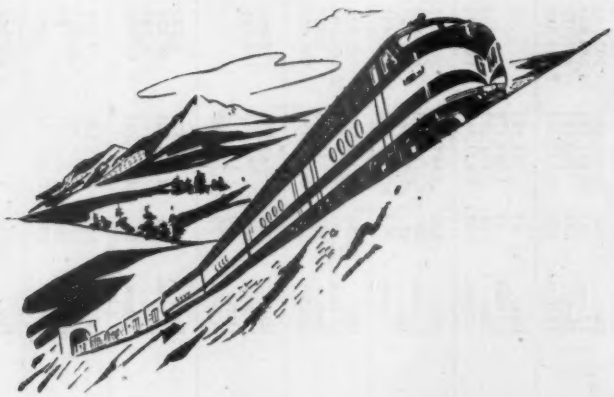
REVENUES AND EXPENSES OF RAILWAYS

MONTH OF DECEMBER AND TWELVE MONTHS OF CALENDAR YEAR 1944—CONTINUED

Name of road		Av. mileage operated during period	Operating revenues: Freight	Passenger	Total (inc. misc.)	Operating expenses: Maintenance of Way and structures	Maintenance of Equipment	Traffic	Transportation	Total	Operating ratio	Net from railway operation	Operating income	Net railway operating income 1944	1943
Chicago, Milwaukee, St. Paul & Pacific	Dec.	10,723	$14,073,565	$2,897,849	$18,677,060	$3,341,085	$3,030,750	$287,722	$6,688,620	$14,051,141	75.2	$4,625,919	$3,351,919	$2,797,878	—$1,440,021
	12 mos.	10,727	171,448,855	33,885,998	226,709,693	38,878,167	35,028,904	3,570,829	74,853,049	160,585,506	70.8	66,124,187	36,951,187	32,709,519	50,668,954
Chicago, Rock Island & Pacific	Dec.	7,750	10,763,783	3,587,652	15,603,989	1,341,804	2,231,685	341,510	4,786,841	9,302,071	59.6	6,301,918	1,140,924	549,259	—836,035
	12 mos.	7,751	131,528,322	44,499,164	190,401,106	23,741,031	26,193,751	4,088,767	54,206,129	115,477,735	60.6	74,923,371	32,991,740	26,079,690	36,794,983
Chicago, St. Paul, Minneapolis & Omaha	Dec.	1,617	1,478,366	361,469	2,031,128	345,215	176,828	42,234	1,000,416	1,647,778	81.1	383,350	205,452	151,321	—701,876
	12 mos.	1,617	20,211,900	4,390,392	26,971,509	3,807,798	3,758,380	485,165	11,483,352	20,519,789	76.1	6,451,720	4,205,633	3,453,622	3,898,532
Clinchfield Railroad	Dec.	302	1,135,580	13,080	1,157,913	69,101	187,187	22,257	275,806	575,335	49.7	582,578	444,726	456,276	492,069
	12 mos.	302	14,008,369	133,560	14,244,001	1,008,848	2,267,256	269,215	2,990,423	6,785,674	47.6	7,458,327	5,881,173	6,094,811	5,232,725
Colorado & Southern	Dec.	748	968,342	305,782	1,386,987	335,554	303,686	17,478	482,259	1,185,258	85.5	201,729	150,818	32,482	132,549
	12 mos.	748	11,857,171	3,889,864	17,031,687	2,486,274	2,752,119	207,843	5,294,890	11,306,063	66.4	5,725,624	3,605,942	2,738,386	3,182,651
Fort Worth & Denver City	Dec.	804	762,761	431,770	1,387,940	376,583	252,864	25,214	393,511	1,119,728	80.7	268,212	299,475	178,885	297,565
	12 mos.	804	10,435,279	5,445,486	17,217,191	3,314,052	1,859,393	299,882	4,430,289	10,631,894	61.8	6,585,297	3,867,087	2,974,141	3,972,146
Colorado & Wyoming	Dec.	42	95,881	.....	153,360	7,730	19,990	789	62,049	95,105	62.0	58,255	25,871	24,898	90,402
	12 mos.	42	1,064,174	.....	1,704,833	138,785	237,987	9,027	658,806	1,099,265	64.4	605,568	354,156	344,787	331,342
Columbus & Greenville	Dec.	168	136,692	14,403	160,198	48,021	18,958	5,826	51,956	151,680	94.7	8,518	—46,922	—45,906	—1,150
	12 mos.	168	1,423,967	141,140	1,677,683	362,974	224,626	56,203	564,805	1,387,536	82.7	290,147	45,574	60,943	54,183
Delaware & Hudson	Dec.	846	3,555,437	221,551	3,869,958	489,506	1,107,008	48,279	1,458,690	3,219,946	83.2	650,012	754,606	766,829	1,646,337
	12 mos.	847	46,737,323	2,531,603	50,484,717	6,025,387	12,715,412	572,578	17,135,354	37,839,777	75.0	12,644,940	8,903,939	8,848,260	11,132,460
Delaware, Lackawanna & Western	Dec.	973	5,012,361	959,263	6,549,949	683,136	1,024,519	112,749	2,909,519	4,893,095	74.7	1,656,854	887,066	795,674	1,146,812
	12 mos.	973	60,469,835	11,120,461	79,029,144	8,638,847	12,355,032	1,370,431	32,385,037	56,926,747	72.0	22,102,397	7,501,465	6,420,112	11,181,280
Denver & Rio Grande Western	Dec.	2,386	5,098,601	742,126	6,129,192	1,514,093	2,931,834	101,125	1,807,333	6,553,633	106.9	—424,441	—1,984,427	—2,117,571	—3,150,649
	12 mos.	2,391	57,469,339	9,664,304	70,346,987	9,487,436	15,669,926	1,218,107	21,027,800	49,777,178	70.8	20,569,809	11,787,396	10,554,956	12,050,824
Denver & Salt Lake	Dec.	232	232,893	9,229	252,723	47,883	55,605	2,967	102,065	221,011	87.5	31,712	—4,258	39,461	14,250
	12 mos.	232	3,108,496	108,963	3,345,911	696,186	677,156	35,623	1,136,049	2,678,416	80.1	667,495	299,825	874,664	630,665
Detroit & Mackinac	Dec.	230	62,913	13,084	82,410	15,515	18,778	819	33,729	72,524	88.0	9,886	5,441	3,555	—92,221
	12 mos.	230	786,313	138,745	1,016,205	218,350	210,797	9,877	383,181	869,293	85.5	146,912	95,046	65,267	—56,742
Detroit & Toledo Shore Line	Dec.	50	359,127	.....	359,967	30,258	24,680	9,936	68,162	141,715	39.4	218,252	114,584	59,164	32,570
	12 mos.	50	4,265,300	.....	4,280,735	419,263	307,930	117,482	1,174,809	2,123,150	49.6	2,157,585	1,323,950	693,529	681,936
Detroit, Toledo & Ironton	Dec.	464	721,527	1,770	748,905	78,565	120,217	16,105	206,941	451,465	60.3	297,440	232,208	248,017	169,989
	12 mos.	464	8,555,861	17,476	8,990,261	1,069,356	1,585,953	182,073	2,364,748	5,509,418	61.3	3,480,843	2,114,255	2,152,105	2,458,734
Duluth, Missabe & Iron Range	Dec.	546	212,796	6,729	256,989	511,601	565,950	5,610	306,364	1,469,289	571.7	—1,212,300	—2,420,136	—2,358,226	754,423
	12 mos.	546	34,995,723	68,954	40,600,071	4,828,798	6,545,189	52,743	8,187,583	20,211,808	49.8	20,388,263	9,125,607	9,335,449	9,531,111
Duluth, Winnipeg & Pacific	Dec.	175	205,586	3,329	218,407	50,709	30,552	5,102	94,866	185,506	84.9	32,901	15,825	1,484	127,219
	12 mos.	175	2,928,586	44,829	3,040,907	625,126	381,985	28,405	1,215,986	2,300,020	75.6	740,887	509,109	180,909	395,871
Elgin, Joliet & Eastern	Dec.	392	2,696,683	81	3,063,774	225,075	812,425	17,046	1,081,149	2,209,054	72.1	854,720	—102,895	—187,288	143,378
	12 mos.	392	30,242,775	282	34,925,732	3,196,835	9,261,826	204,645	12,292,639	25,757,345	73.7	9,168,387	3,920,209	3,124,532	1,946,923
Erie	Dec.	2,243	9,702,870	1,068,382	11,489,241	1,330,798	2,210,788	224,525	5,004,545	9,219,582	80.2	2,269,659	—1,067,560	—1,528,384	2,479,811
	12 mos.	2,244	133,248,149	13,635,138	156,720,899	16,307,394	26,752,747	2,737,844	57,894,842	109,122,118	69.6	47,598,781	23,583,362	16,324,332	19,807,690
Florida East Coast	Dec.	682	1,128,901	1,166,499	2,613,543	423,050	318,699	53,970	888,477	1,784,853	68.3	828,690	450,786	376,457	718,241
	12 mos.	682	15,950,185	13,259,873	31,730,202	4,123,318	3,565,496	630,419	9,248,079	19,055,811	60.1	12,674,391	7,007,505	5,951,599	10,173,479
Georgia Railroad	Dec.	329	578,104	122,706	735,141	102,673	118,426	23,758	331,554	598,073	81.4	137,068	91,046	102,938	18,291
	12 mos.	329	7,885,176	1,841,831	10,245,412	1,249,728	1,399,088	265,100	3,752,007	6,926,382	67.6	3,319,030	2,905,842	2,879,839	3,564,793
Georgia & Florida	Dec.	408	161,908	7,174	174,483	49,623	25,837	10,933	65,451	159,396	91.4	15,087	3,807	—6,049	—10,194
	12 mos.	408	2,217,993	82,861	2,364,380	635,504	303,906	128,518	833,977	1,993,465	84.3	370,915	240,416	113,059	205,915
Grand Trunk Western	Dec.	1,026	2,315,054	332,154	2,853,616	453,967	502,040	31,037	1,266,197	2,366,512	82.9	487,104	432,612	452,731	754,936
	12 mos.	1,026	28,649,054	4,549,154	35,522,616	5,869,337	5,840,682	445,762	13,944,416	27,450,541	77.3	8,072,075	5,638,893	5,383,576	6,712,043
Canadian National Lines in New England	Dec.	172	135,452	14,253	178,531	48,795	13,687	2,300	90,297	172,669	96.7	5,862	—27,759	—55,039	—44,163
	12 mos.	172	1,447,652	150,353	1,880,231	601,455	368,353	27,935	1,076,399	2,295,028	122.0	—414,797	—684,313	—1,077,802	—1,243,546
Great Northern	Dec.	8,371	12,803,942	2,055,290	15,958,336	2,364,373	3,133,205	264,053	4,787,076	11,018,970	69.1	4,939,366	4,393,451	4,232,345	2,888,379
	12 mos.	8,372	171,957,001	20,816,206	207,657,795	33,078,700	35,443,596	2,186,816	56,180,890	132,595,460	63.9	75,062,335	35,061,077	32,968,620	28,562,967
Green Bay & Western	Dec.		215,430	621	221,806	118,045	13,986	8,030	63,717	211,635	95.41	10,171	11,948	31,117	—1,028
	12 mos.		2,724,288	7,798	2,809,550	906,405	276,065	98,351	825,758	2,199,183	78.27	610,367	223,226	175,111	562,841
Gulf & Ship Island	Dec.	259	153,171	35,171	218,223	48,615	37,480	2,618	92,436	190,984	87.5	27,239	26,270	11,379	75,381
	12 mos.	259	1,969,133	538,604	2,814,668	584,266	309,711	31,052	1,098,768	2,139,064	76.0	675,604	436,040	257,959	—35,581

IT'S A GREAT NEW DAY FOR RAILROADING

HOW DURABLE IS A DIESEL?



GENERAL MOTORS
LOCOMOTIVES

All General Motors Diesel locomotives ever built and put in freight, passenger runs, or switching service, excepting the few destroyed in wrecks, during the past ten years are still going strong.

In fact, many of these Diesels are actually better than when built due to improvements that have been made in certain service and replacement parts.

So it's pretty hard to say how durable these General Motors locomotives are since they bid fair to continue indefinitely. And, up to date, there are upwards of 1,800 units of them on 83 of America's major railroads and in heavy industries.

ELECTRO-MOTIVE DIVISION
GENERAL MOTORS CORPORATION LA GRANGE, ILL.

REVENUES AND EXPENSES OF RAILWAYS

MONTH OF DECEMBER AND TWELVE MONTHS OF CALENDAR YEAR 1944—CONTINUED

Name of road		Av. mileage operated during period	Operating revenues: Freight	Passenger	Total (inc. misc.)	Operating expenses: Maintenance of Way and structures	Maintenance of Equipment	Traffic	Transportation	Total	Operating ratio	Net from railway operation	Operating income	Net railway operating income 1944	Net railway operating income 1943
Gulf, Mobile & Ohio	Dec.	1,952	$2,813,429	$231,474	$3,151,721	$645,723	$589,909	$98,946	$895,364	$2,367,972	75.1	$783,749	$542,978	$368,435	$1,372,103
	12 mos.	1,963	33,777,243	2,746,236	37,736,646	6,663,630	6,429,565	995,479	10,397,786	25,952,251	68.8	11,784,435	6,508,780	4,624,909	5,918,935
Illinois Central	Dec.	4,823	14,234,428	2,996,693	18,260,171	1,985,456	3,299,110	211,528	5,535,886	11,672,620	63.9	6,587,551	2,305,308	2,143,908	4,300,279
	12 mos.	4,823	172,062,189	37,281,315	223,273,710	32,036,220	39,532,579	2,368,279	62,843,583	144,336,215	64.6	78,937,495	27,834,652	24,627,493	33,867,434
Yazoo & Mississippi Valley	Dec.	1,524	2,352,121	607,102	3,137,044	595,441	288,054	34,513	1,078,397	2,086,616	66.5	1,050,428	—134,121	—224,960	—829,935
	12 mos.	1,524	28,747,525	5,344,582	35,998,193	5,941,501	3,999,185	380,125	11,309,362	22,735,744	63.2	13,262,449	5,592,582	4,268,574	4,354,593
Illinois Central System	Dec.	6,347	16,586,549	3,603,795	21,397,215	2,580,897	3,587,164	246,041	6,614,283	13,759,236	64.3	7,637,979	2,167,576	1,927,163	3,476,231
	12 mos.	6,347	200,809,714	42,625,897	259,271,903	37,977,721	43,531,764	2,748,404	74,152,945	167,071,959	64.4	92,199,944	33,373,535	28,953,324	38,260,956
Illinois Terminal	Dec.	476	673,666	189,580	936,120	133,447	104,674	19,769	316,519	601,262	64.23	334,858	129,659	123,221	136,871
	12 mos.	476	8,436,596	2,181,746	11,585,474	1,288,866	1,131,893	238,115	3,476,365	6,456,218	55.73	5,129,256	1,786,010	1,435,010	1,557,310
Kansas City Southern	Dec.	890	2,937,853	356,907	3,506,720	485,431	546,845	74,087	1,084,477	2,354,421	67.1	1,152,299	899,263	620,414	149,839
	12 mos.	879	36,779,498	5,134,325	44,373,030	6,030,077	6,183,378	752,947	11,852,373	26,416,266	59.5	17,956,764	9,700,728	6,450,047	4,989,139
Kansas, Oklahoma & Gulf	Dec.	328	213,809	1,965	219,404	31,443	30,305	13,152	84,029	172,786	78.8	46,618	—88,401	—112,732	186,238
	12 mos.	328	4,039,468	20,607	4,097,959	501,569	256,841	118,486	935,376	1,947,145	47.5	2,150,814	1,091,255	806,546	983,111
Lake Superior & Ishpeming	Dec.	156	36,097	133	38,672	43,422	44,598	550	30,299	133,774	345.9	—95,102	—111,250	—102,071	—155,683
	12 mos.	156	2,317,505	1,719	2,949,194	410,436	416,217	7,534	674,108	1,611,913	54.7	1,337,281	585,532	678,450	670,998
Lehigh & Hudson River	Dec.	96	229,422	1,272	231,470	44,995	38,860	5,611	77,019	172,865	74.7	58,605	66,468	49,427	17,770
	12 mos.	96	3,097,689	3,078	3,109,505	579,171	443,745	63,373	924,165	2,094,848	67.4	1,014,657	516,786	288,421	284,349
Lehigh & New England	Dec.	190	438,721	.....	442,101	41,925	108,463	9,243	146,506	325,778	73.7	116,323	149,681	153,766	519,274
	12 mos.	190	6,234,687	.....	6,270,837	562,813	1,400,402	93,445	1,845,306	4,142,523	66.1	2,128,314	1,258,136	1,361,470	1,726,011
Lehigh Valley	Dec.	1,260	6,081,836	741,544	7,177,864	968,649	1,350,129	117,554	3,070,376	5,762,671	80.3	1,415,193	—4,042,173	—4,420,146	1,263,992
	12 mos.	1,260	83,728,284	8,533,480	97,465,275	14,165,479	16,014,578	1,450,195	36,598,300	70,873,270	72.7	26,592,005	13,105,778	7,828,292	13,477,689
Louisiana & Arkansas	Dec.	834	1,714,919	153,789	1,934,275	234,361	217,787	46,326	495,810	1,059,210	54.8	875,065	297,171	218,287	229,517
	12 mos.	834	18,757,801	1,965,279	21,451,870	3,885,860	2,330,208	421,328	4,637,800	12,012,811	56.0	9,439,059	3,457,957	2,533,467	2,230,217
Louisville & Nashville	Dec.	4,752	13,037,744	4,000,464	18,638,662	1,612,391	3,132,324	239,871	5,699,389	11,314,115	60.7	7,324,547	—236,665	—4,729	1,535,258
	12 mos.	4,746	155,689,563	46,351,782	214,779,541	22,825,245	35,874,624	2,558,367	63,602,772	131,882,614	61.4	82,896,927	19,226,666	22,637,129	25,513,401
Maine Central	Dec.	988	1,388,458	334,525	1,832,064	446,370	304,877	15,636	671,076	1,491,959	81.4	340,105	267,003	247,927	88,294
	12 mos.	988	15,058,461	3,973,147	20,400,663	4,261,281	3,477,280	159,918	7,024,360	15,532,946	76.1	4,867,717	2,292,968	1,880,732	2,346,408
Midland Valley	Dec.	334	119,032	187	122,131	21,944	14,490	2,974	45,225	90,046	73.7	32,085	7,520	—528	82,005
	12 mos.	334	1,627,184	2,035	1,658,490	335,903	156,035	29,179	561,648	1,138,811	68.7	519,679	347,077	226,727	412,936
Minneapolis & St. Louis	Dec.	1,408	1,139,080	35,528	1,223,171	131,246	209,899	64,969	425,987	885,207	72.4	337,964	283,119	269,757	157,127
	12 mos.	1,408	14,207,826	458,656	15,250,079	2,497,573	2,136,759	780,123	4,794,205	10,897,377	71.5	4,352,702	1,977,191	1,795,224	3,478,557
Minneapolis, St. Paul & Sault Ste. Marie	Dec.	4,276	3,086,781	262,292	3,646,691	687,307	683,173	75,616	1,653,478	3,228,825	88.5	417,866	45,676	55,577	—880,090
	12 mos.	4,277	45,443,337	3,075,470	52,058,594	8,067,291	8,513,161	888,882	18,980,903	38,010,051	73.0	14,048,543	8,940,292	8,481,985	8,398,092
Duluth, South Shore & Atlantic	Dec.	550	274,497	35,158	331,063	64,820	68,269	12,596	156,883	310,398	93.8	20,665	558	—4,465	—54,145
	12 mos.	551	3,640,634	378,882	4,306,705	52,144	694,183	113,047	1,617,056	3,372,932	78.3	933,773	702,674	642,880	1,000,744
Spokane International	Dec.	152	161,322	5,282	184,834	36,818	8,691	3,505	44,098	100,712	54.5	84,122	64,944	55,696	64,034
	12 mos.	152	1,906,737	94,980	2,118,741	570,735	166,164	40,956	558,433	1,419,501	67.0	699,241	409,723	275,890	332,495
Mississippi Central	Dec.	158	156,295	14,660	174,723	39,326	15,863	8,851	44,498	115,768	66.3	58,955	44,792	31,333	34,047
	12 mos.	158	2,055,407	85,903	2,179,785	394,632	209,727	107,609	572,707	1,372,067	62.9	807,718	524,873	366,389	324,732
Missouri & Arkansas	Dec.	365	220,268	3,221	231,857	121,828	26,620	7,976	95,493	259,877	112.1	—28,020	—22,074	—46,432	8,661
	12 mos.	365	2,428,698	43,640	2,575,273	702,022	295,546	93,082	858,041	2,034,497	79.0	540,776	353,768	131,080	34,649
Missouri-Illinois	Dec.	172	297,821	571	300,322	59,307	33,775	3,949	88,188	192,633	64.1	107,689	34,090	32,351	55,649
	12 mos.	172	3,460,424	14,207	3,496,492	537,874	493,423	45,564	941,089	2,094,616	59.9	1,401,876	645,294	569,213	449,727
Missouri-Kansas-Texas Lines	Dec.	3,253	5,644,501	1,219,083	7,398,835	3,117,699	809,741	147,451	2,125,865	6,493,445	87.8	905,390	3,073,543	2,564,156	99,791
	12 mos.	3,261	64,057,249	13,918,458	84,022,042	20,233,233	10,073,061	1,619,578	24,014,881	58,814,884	70.0	25,207,158	14,664,369	9,469,440	9,227,193
Missouri Pacific	Dec.	7,082	15,705,745	3,480,374	20,772,639	2,188,875	2,897,823	307,587	5,679,418	11,641,781	56.0	9,130,858	3,668,921	2,909,030	—1,848,388
	12 mos.	7,096	176,531,058	43,401,655	236,563,909	27,420,648	32,393,512	3,681,950	65,007,585	135,182,277	57.1	101,381,632	44,374,390	34,309,049	34,574,379
Gulf Coast Lines	Dec.	1,734	3,666,335	351,010	4,193,512	738,509	352,071	23,360	1,047,813	2,259,663	53.9	1,933,849	742,309	417,703	720,930
	12 mos.	1,734	41,755,473	4,237,589	47,752,224	7,562,741	4,380,404	663,449	11,351,989	25,044,025	52.4	22,708,199	10,109,278	6,591,588	5,152,326
International Great Northern	Dec.	1,110	1,984,052	534,646	2,705,444	535,828	343,221	38,353	813,690	1,833,734	67.8	871,710	449,941	287,824	1,082,657
	12 mos.	1,110	21,787,284	6,225,372	30,882,213	5,913,428	4,089,520	438,499	9,829,957	21,466,757	69.5	9,415,456	5,445,930	3,452,722	4,921,149
Monongahela	Dec.	170	479,782	2,714	485,038	38,425	36,470	611	140,953	219,689	45.3	265,349	171,720	86,042	—38,828
	12 mos.	170	6,560,284	26,431	6,642,681	891,689	559,308	8,242	1,717,569	3,222,003	48.5	3,420,678	2,287,020	1,238,428	1,215,284

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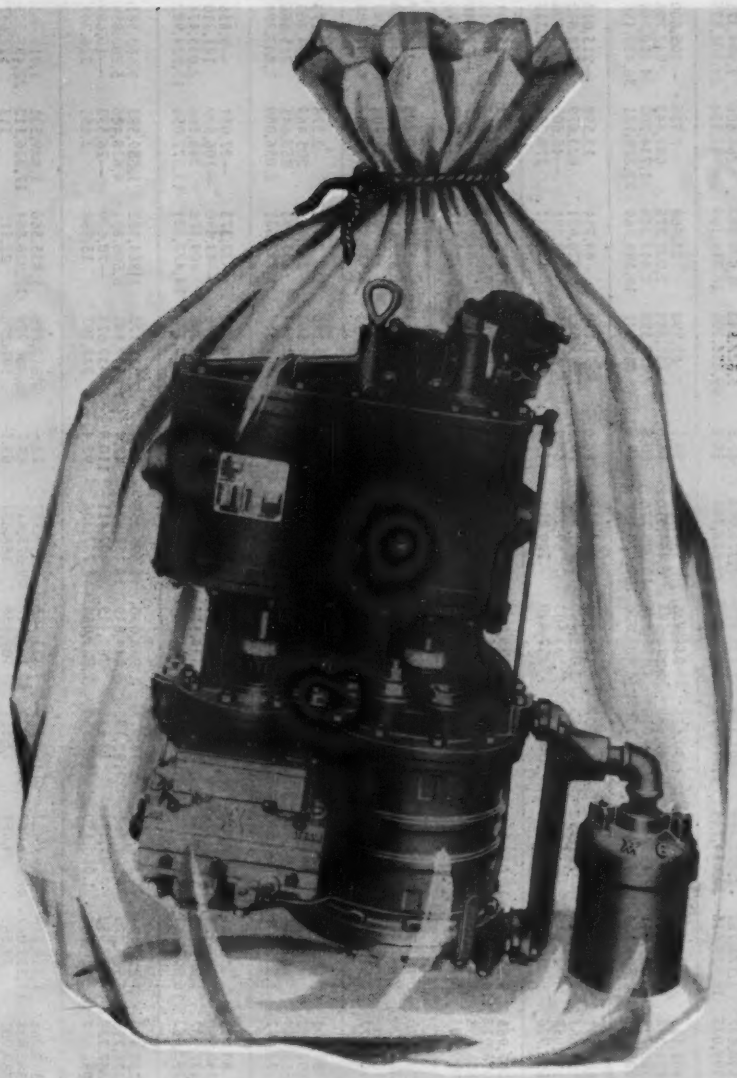

All In One Package

The 8½" Air Compressor is a compact compressor plant—complete with all the necessary auxiliaries. The governor to regulate compressor operation, and the F-2 lubricator to provide metered lubrication *when the compressor is running* are mounted right on the compressor.

Initially the installation is easier as less piping and fewer fittings are required. And at shopping periods the whole plant can be removed and replaced in a shorter time, with far less effort.

Refitting and testing of the unit are easier and make for dependable compressor operation. Assembled right on the compressor, the governor and lubricator can be adjusted with the knowledge that these auxiliaries are functioning . . . *when installed.* And as no piecemeal fitting is required on the locomotive there is every confidence that the compressor plant will function as intended.

Integral mounting of these accessories means easier installation, more dependable compressor operation—greater assurance that the compressor will be on the job from shopping to shopping.

Westinghouse Air Brake Company

Wilmerding, Pa.

REVENUES AND EXPENSES OF RAILWAYS

MONTH OF DECEMBER AND TWELVE MONTHS OF CALENDAR YEAR 1944—CONTINUED

Name of road		Av. mileage operated during period	Operating revenues: Freight	Passenger	Total (inc. misc.)	Operating expenses: Maintenance of Way and structures	Maintenance of Equipment	Traffic	Transportation	Total	Operating ratio	Net from railway operation	Operating income	Net railway operating income 1944	Net railway operating income 1943
Montour	Dec.	51	$191,617	.....	$193,133	$12,378	$55,152	$1,105	$80,084	$157,116	81.4	$36,017	$938	$36,901	—$9,315
	12 mos.	51	2,943,256	.....	2,958,143	213,567	764,145	12,123	870,342	1,955,044	66.1	1,003,099	291,439	758,310	674,685
Nashville, Chattanooga & St. Louis	Dec.	1,073	2,429,649	$625,985	3,452,503	684,817	990,286	81,938	1,074,103	2,935,496	85.0	$17,007	368,540	329,745	586,072
	12 mos.	1,072	31,737,722	7,635,396	42,609,753	7,599,266	9,163,302	983,140	13,235,646	32,266,928	75.7	10,342,825	4,122,164	3,698,204	5,083,496
New York Central	Dec.	10,746	34,708,568	12,180,687	51,834,089	11,822,590	9,690,962	1,488,248	24,868,137	50,530,111	97.5	1,303,978	5,947,040	4,261,639	8,084,936
	12 mos.	10,746	468,283,532	180,965,132	714,963,385	106,222,923	127,501,305	9,283,768	261,400,205	531,839,633	74.4	183,123,752	84,747,015	65,768,309	88,524,297
Pittsburgh & Lake Erie	Dec.	229	2,059,310	147,013	2,292,929	406,156	846,470	41,603	959,027	2,367,737	103.3	—74,808	—296,948	256,937	326,148
	12 mos.	229	31,867,217	1,369,704	34,318,196	4,156,968	11,111,306	$17,861	11,388,036	28,475,802	83.0	5,842,394	—1,203,227	5,245,282	5,873,225
New York, Chicago & St. Louis	Dec.	1,687	7,755,044	292,148	8,192,671	1,044,610	1,401,006	141,261	2,589,218	5,408,708	66.0	2,783,963	1,171,431	847,822	712,659
	12 mos.	1,688	93,920,984	4,661,218	100,458,548	10,633,077	15,030,896	1,682,470	30,757,446	60,618,755	60.3	39,839,793	16,666,778	11,290,714	13,265,201
New York, New Haven & Hartford	Dec.	1,838	7,152,177	6,851,738	14,981,108	1,897,825	2,358,154	210,737	5,450,156	10,657,522	71.1	4,323,586	1,773,871	848,920	—108,489
	12 mos.	1,838	92,738,207	75,815,572	182,394,331	23,704,034	27,409,202	1,831,071	63,543,639	125,205,886	68.6	57,188,445	32,930,132	20,146,318	30,791,940
New York Connecting	Dec.	21	219,863	.....	231,401	232,879	12,118	.....	50,723	297,480	128.6	—66,079	—145,724	32,154	227,719
	12 mos.	21	2,711,033	.....	2,973,157	988,515	146,347	.....	629,853	1,787,377	60.1	1,185,780	—419,218	1,555,014	1,499,935
New York, Ontario & Western	Dec.	550	560,161	5,320	631,487	130,661	132,301	23,090	440,206	753,059	119.3	—121,572	—219,919	—272,080	—79,062
	12 mos.	550	8,075,259	454,710	9,244,352	1,142,480	1,844,350	279,327	5,329,348	8,915,106	96.4	329,246	—261,055	—989,091	209,091
New York, Susquehanna & Western	Dec.	120	357,645	34,680	403,448	30,087	8,963	4,767	158,764	219,534	54.4	183,914	109,738	72,459	98,664
	12 mos.	120	5,066,054	425,004	5,659,350	446,798	486,760	56,359	2,023,313	3,208,537	56.7	2,450,813	1,578,062	910,185	1,089,269
Norfolk & Western	Dec.	2,154	10,807,313	1,356,009	12,598,637	1,173,792	2,377,398	201,139	3,135,875	7,276,094	57.8	5,322,543	1,621,882	2,268,606	2,994,371
	12 mos.	2,154	137,570,814	17,198,916	159,599,035	16,939,615	30,654,144	2,017,922	35,780,534	89,712,834	56.2	69,886,201	18,211,169	25,943,534	24,908,875
Norfolk Southern	Dec.	727	553,307	30,832	605,175	136,832	85,921	30,675	258,835	539,185	89.1	65,990	23,968	—7,936	—105,800
	12 mos.	728	7,625,788	332,250	8,221,894	1,922,146	994,603	349,689	2,870,594	6,464,510	78.6	1,757,384	1,035,275	682,845	943,296
Northern Pacific	Dec.	6,867	9,267,711	2,093,214	12,386,734	2,324,941	2,465,925	208,752	4,455,828	10,009,176	80.8	2,377,558	1,413,366	1,734,700	4,476,264
	12 mos.	6,867	120,307,810	22,855,377	155,978,311	22,804,484	29,426,857	2,223,736	46,407,326	107,618,190	69	48,360,121	19,584,264	23,378,121	36,423,456
Northwestern Pacific	Dec.	331	462,767	22,858	507,591	179,706	52,930	4,607	184,403	436,461	86.0	71,130	44,714	13,598	—215,013
	12 mos.	331	5,634,978	245,335	6,157,681	2,011,502	721,983	36,653	2,052,360	4,911,999	79.8	1,245,682	926,621	623,679	574,802
Oklahoma City-Ada-Atoka	Dec.	132	112,307	908	114,055	23,546	4,764	1,740	33,503	69,220	60.7	44,835	—28,391	—46,609	81,796
	12 mos.	132	1,572,520	6,998	1,595,926	236,988	57,302	14,851	357,429	720,814	45.2	875,112	451,621	278,254	390,313
Pennsylvania	Dec.	10,115	49,628,734	22,577,175	78,097,965	9,514,006	13,053,166	1,377,618	33,596,020	60,472,463	77.4	17,625,502	4,908,119	4,032,798	9,075,801
	12 mos.	10,098	674,395,308	260,804,982	1,010,015,912	116,752,771	186,610,888	12,683,678	386,095,118	736,318,745	72.9	273,697,167	120,858,759	108,972,066	127,546,411
Long Island	Dec.	376	1,094,597	2,079,200	3,335,658	474,761	464,132	20,246	1,657,204	2,721,484	81.6	614,174	284,801	29,427	—77,946
	12 mos.	376	14,329,872	28,460,948	44,947,735	6,728,707	6,491,145	259,754	19,592,155	33,792,628	75.2	11,155,107	5,788,417	2,813,649	3,736,092
Pennsylvania-Reading Seashore Lines	Dec.	392	493,878	257,802	780,270	163,334	47,046	7,377	463,506	703,799	90.2	76,471	—12,500	—110,205	—214,157
	12 mos.	392	6,225,557	5,724,891	12,367,620	1,947,468	1,154,005	100,936	5,730,436	9,244,708	74.7	3,122,912	1,852,611	418,992	843,339
Pere Marquette	Dec.	1,949	3,701,674	276,021	4,131,165	735,026	882,704	71,455	1,771,979	3,607,762	87.3	523,403	392,001	355,708	203,193
	12 mos.	1,962	49,771,833	3,920,675	56,302,777	9,935,830	10,222,245	870,863	20,089,510	43,219,772	76.8	13,083,005	5,918,206	5,010,307	6,003,088
Pittsburg & Shawmut	Dec.	97	94,257	.....	95,004	23,025	24,046	2,751	33,749	91,858	96.7	3,146	3,493	2,378	2,273
	12 mos.	97	1,493,876	.....	1,502,022	418,551	301,047	22,956	433,482	1,247,459	83.1	254,563	226,054	205,469	234,303
Pittsburgh & West Virginia	Dec.	136	542,940	.....	561,049	81,938	101,241	21,492	146,278	378,135	67.4	182,914	233,093	253,645	215,686
	12 mos.	136	7,052,348	187	7,273,057	1,253,827	1,347,596	252,798	1,821,865	5,007,500	68.8	2,265,557	1,792,631	2,056,080	1,883,294
Pittsburg, Shawmut & Northern	Dec.	190	79,799	.....	80,913	18,548	15,828	983	45,808	87,162	107.7	—6,249	—22,373	—27,051	—9,855
	12 mos.	190	1,225,548	.....	1,239,790	301,224	257,391	13,058	552,361	1,193,214	96.2	46,576	—43,690	—106,529	121,310
Reading	Dec.	1,372	8,057,130	929,701	9,437,907	1,969,227	2,063,911	84,714	3,474,413	7,837,509	83.0	1,600,398	409,178	348,166	2,035,474
	12 mos.	1,407	100,190,804	10,431,501	115,793,963	16,269,767	23,004,982	1,001,459	39,911,060	82,691,229	71.4	33,102,734	14,473,321	13,372,055	17,924,982
Richmond, Fredericksburg & Potomac	Dec.	118	1,507,550	1,718,599	3,730,440	217,474	359,459	14,917	998,030	1,695,268	45.4	2,035,172	1,864,182	1,689,585	1,663,581
	12 mos.	118	18,198,857	16,785,373	38,371,715	2,528,579	4,394,561	182,155	9,644,849	18,178,874	47.4	20,192,841	6,506,891	4,638,406	5,203,854
Rutland	Dec.	407	238,149	58,352	367,733	47,953	97,494	13,421	232,445	407,411	110.8	—39,678	—70,629	—76,533	—10,689
	12 mos.	407	3,527,104	742,937	5,086,697	730,107	1,066,450	147,250	2,622,064	4,753,306	93.4	333,391	15,988	3,851	326,949
St. Louis-San Francisco	Dec.	4,647	6,554,736	1,982,294	9,531,363	1,368,848	1,623,022	169,179	3,395,505	6,918,587	72.6	2,612,776	1,835,566	1,439,531	1,911,061
	12 mos.	4,650	83,151,498	24,291,521	115,982,818	15,233,067	21,139,067	2,010,099	37,103,742	79,675,842	68.7	36,306,976	17,936,864	17,336,113	22,488,529
St. Louis, San Francisco & Texas	Dec.	159	255,813	21,833	289,901	29,569	29,654	12,551	109,438	188,631	65.1	101,270	22,515	513	122,647
	12 mos.	159	3,431,179	336,514	3,866,483	459,327	368,303	137,309	1,240,256	2,292,658	59.3	1,573,825	664,677	367,343	1,097,518

Table continued on next left-hand page

Getting the most out of motive power . . .

. . . means seeing that locomotives perform efficiently, economically, and with little time out for replacements. Many mechanical supervisors believe that this means standardizing on HUNT-SPILLER *Air Furnace* GUN IRON for vital parts. They have learned to depend upon its superior wear and heat resisting qualities.

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(Duplex Springs for Above Sectional Packing)
Cylinder Snap Rings
Valve Rings, All Shapes
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Cylinder Liners and Pistons for Diesel Service

REVENUES AND EXPENSES OF RAILWAYS

MONTH OF DECEMBER AND TWELVE MONTHS OF CALENDAR YEAR 1944—CONTINUED

Name of road		Av. mileage operated during period	Operating revenues: Freight	Passenger	Total (inc. misc.)	Operating expenses: Maintenance of Way and structures	Maintenance of Equipment	Traffic	Transportation	Total	Operating ratio	Net from railway operation	Operating income	Net railway operating income 1944	Net railway operating income 1943
St. Louis Southwestern Lines	Dec.	1,607	$5,662,878	$537,455	$6,359,241	$516,489	$594,555	$119,624	$1,451,897	$2,828,405	44.5	$3,530,836	$1,221,389	$955,609	$563,327
	12 mos.	1,607	66,524,758	4,339,826	72,586,941	7,395,337	6,757,350	1,239,448	16,226,044	33,222,784	45.8	39,364,157	14,231,276	10,807,120	10,677,148
Seaboard Air Line	Dec.	4,173	7,313,885	3,605,413	11,780,334	1,749,736	1,822,687	243,728	4,133,280	8,454,752	71.8	3,325,582	2,103,187	1,646,282	—2,231,313
	12 mos.	4,174	88,907,329	42,647,241	141,188,977	17,643,725	20,148,182	2,833,867	42,332,984	88,939,443	63.0	52,249,534	27,452,139	22,300,395	28,704,006
Southern Railway	Dec.	6,505	14,851,067	4,652,067	20,816,509	1,748,347	3,626,336	210,685	6,846,657	13,125,348	63.1	7,691,161	3,680,167	3,334,927	2,342,548
	12 mos.	6,509	186,821,986	59,270,726	260,978,544	30,654,358	40,980,700	2,583,052	74,871,356	156,911,481	60.1	104,067,063	37,425,885	33,415,841	35,744,757
Alabama Great Southern	Dec.	315	1,056,590	384,144	1,541,983	97,958	343,413	22,635	610,911	1,128,782	73.2	413,201	133,892	80,137	224,411
	12 mos.	315	15,780,724	4,995,845	21,896,607	2,011,545	3,804,887	276,697	8,760,667	13,551,099	61.9	8,345,508	2,530,069	1,815,363	3,000,736
Cincinnati, New Orleans & Texas Pacific	Dec.	337	2,173,189	706,351	3,051,357	174,751	700,372	40,934	828,051	1,835,565	60.2	1,215,792	364,917	402,808	671,148
	12 mos.	337	28,340,961	8,093,014	38,246,721	3,524,786	8,096,827	445,504	9,865,182	23,012,600	60.2	15,234,121	4,597,276	4,914,310	6,440,820
Georgia Southern & Florida	Dec.	397	234,352	197,318	492,780	Cr. 4,934	65,108	2,481	184,125	264,027	53.6	228,753	197,826	161,142	165,037
	12 mos.	397	3,476,034	2,397,794	6,511,350	872,525	853,222	31,100	2,122,541	4,076,060	62.6	2,435,290	1,239,736	809,423	1,189,382
New Orleans & Northeastern	Dec.	204	645,111	172,498	875,230	Cr. 66,487	148,151	11,234	300,800	428,347	48.9	446,883	177,184	101,457	136,788
	12 mos.	204	9,652,963	2,553,524	12,802,210	1,339,123	1,551,172	139,750	3,729,840	7,206,840	56.3	5,595,370	2,148,402	1,196,002	1,709,465
Southern Pacific	Dec.	8,247	28,403,219	8,332,384	40,145,367	5,487,268	7,796,268	664,330	14,474,824	30,667,546	76.4	9,477,821	4,652,115	3,419,437	—666,322
	12 mos.	8,261	347,792,957	105,954,185	493,672,507	66,883,215	89,303,276	7,409,953	155,793,759	345,135,398	69.9	148,537,109	57,024,223	39,421,098	52,756,188
Texas & New Orleans	Dec.	4,333	8,290,340	2,507,341	11,423,071	1,968,518	1,381,767	166,931	3,214,187	7,123,781	62.4	4,299,290	1,702,575	1,133,427	1,426,396
	12 mos.	4,334	98,601,100	28,465,076	134,542,381	18,014,476	16,406,792	1,860,256	35,009,632	75,790,462	56.3	58,751,919	19,283,550	13,025,499	24,506,126
Spokane, Portland & Seattle	Dec.	944	1,794,712	212,226	2,089,179	731,560	165,943	9,751	567,252	1,502,534	71.9	586,645	475,541	481,178	—258,922
	12 mos.	944	21,893,283	2,589,596	25,853,382	6,876,815	2,336,518	156,814	7,507,161	17,612,444	68.1	8,240,938	6,263,854	4,251,953	4,659,898
Tennessee Central	Dec.	286	254,919	35,958	309,475	59,123	58,195	7,279	129,577	271,044	87.6	38,431	2,430	—14,724	—53,796
	12 mos.	286	3,870,399	664,868	4,769,426	1,005,488	778,954	84,167	1,591,748	3,668,396	76.9	1,101,030	582,231	376,707	712,258
Texas & Pacific	Dec.	1,884	4,420,143	1,687,737	6,767,422	887,342	848,134	119,653	1,701,319	3,843,642	56.8	2,923,780	703,504	595,125	680,558
	12 mos.	1,884	52,100,270	21,081,982	80,002,746	10,926,187	11,317,156	1,342,492	19,020,545	45,921,334	57.4	34,081,412	9,123,476	6,757,274	9,244,887
Texas Mexican	Dec.	162	124,719	1,221	144,338	41,516	20,702	3,810	39,928	115,180	79.8	29,158	—1,843	—7,917	—187,594
	12 mos.	162	1,970,214	11,288	2,280,817	524,550	211,575	49,734	570,711	1,469,806	64.4	811,011	476,914	369,195	322,002
Toledo, Peoria & Western	Dec.	239	419,346	143	422,372	47,774	20,600	24,741	92,793	199,156	47.2	223,216	203,965	187,384	170,031
	12 mos.	239	5,183,162	848	5,233,265	487,816	262,669	290,572	1,075,257	2,274,742	43.5	2,958,523	2,661,584	2,403,093	2,343,144
Union Pacific System	Dec.	9,781	37,467,567	7,293,368	47,888,578	4,307,231	7,369,204	643,052	12,759,276	26,724,593	55.8	21,163,985	3,668,241	2,320,983	3,319,008
	12 mos.	9,782	377,242,607	91,571,984	506,590,966	63,195,849	85,426,030	7,010,820	137,571,731	314,959,802	62.2	191,631,164	49,824,961	36,526,015	41,205,856
Utah	Dec.	111	104,617	.....	104,652	16,494	39,360	570	33,106	94,085	89.9	10,567	54,376	72,237	17,647
	12 mos.	111	1,312,462	.....	1,313,305	163,487	460,375	6,758	406,547	1,089,608	83.0	223,697	161,572	196,971	145,473
Virginian	Dec.	657	2,013,822	13,778	2,132,913	246,470	641,530	27,232	523,943	1,498,179	70.2	634,734	411,734	547,307	634,013
	12 mos.	657	28,037,213	114,697	29,169,161	3,159,880	6,925,108	299,846	6,171,969	17,234,294	59.1	11,934,867	5,825,867	7,118,417	7,487,223
Wabash	Dec.	2,393	6,188,261	923,429	7,616,328	893,591	718,095	175,103	2,553,942	4,642,906	61.0	2,973,422	1,371,961	1,009,832	999,496
	12 mos.	2,393	78,426,279	10,734,255	94,701,127	12,185,384	11,471,145	1,995,500	29,468,794	58,245,216	61.5	36,455,911	14,215,811	9,277,432	11,777,668
Ann Arbor	Dec.	294	461,436	9,548	479,662	65,249	100,634	17,786	225,369	421,691	87.9	57,971	43,190	38,911	59,475
	12 mos.	294	5,612,883	130,484	5,946,354	732,256	1,042,077	196,191	2,442,561	4,561,260	76.7	1,385,094	703,187	665,324	773,990
Western Maryland	Dec.	840	2,955,923	35,192	3,076,638	396,192	625,967	46,734	786,112	1,949,151	63.4	1,127,487	675,997	696,191	242,068
	12 mos.	840	35,305,154	374,382	36,727,283	5,249,997	7,151,086	532,577	9,752,873	23,782,119	64.8	12,945,164	6,689,674	7,005,936	7,464,076
Western Pacific	Dec.	1,195	3,796,788	610,991	4,656,438	546,448	692,807	90,783	1,384,566	2,885,469	62.0	1,770,969	2,859,297	2,597,864	7,601,820
	12 mos.	1,195	43,077,139	7,844,411	52,849,947	6,570,978	7,210,189	1,006,474	15,560,110	32,197,414	60.9	20,652,533	12,290,058	10,333,606	18,431,417
Wheeling & Lake Erie	Dec.	507	1,939,699	3	1,988,809	157,573	361,774	44,250	622,060	1,248,632	62.8	740,177	179,273	360,948	193,107
	12 mos.	507	24,223,306	47	25,101,090	2,781,610	4,632,998	503,516	7,525,025	16,093,919	64.1	9,007,171	1,361,564	3,352,437	3,744,662

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Wabash Railroad Company

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February 6, 1945.

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BALDWIN PRODUCTS FOR THE RAILROADS: Steam, diesel-electric and electric locomotives, Diesel engines, Hydraulic presses, Special railroad shop equipment, Testing machines and instruments, Steel tires and rolled steel wheels, Crane wheels, Connecting rods and other steel forgings, Steel castings, Springs, Metal plate fabrication, Boilers, Non-ferrous castings, Bending rolls, Plate planers, Dynamometer cars.

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BALDWIN

The Baldwin Locomotive Works, Philadelphia, Pennsylvania: Locomotive & Ordnance Division; Baldwin Southwark Division; Cramp Brass & Iron Foundries Division; Standard Steel Works Division; The Whitcomb Locomotive Co.; The Pelton Water Wheel Co.; The Midvale Co.

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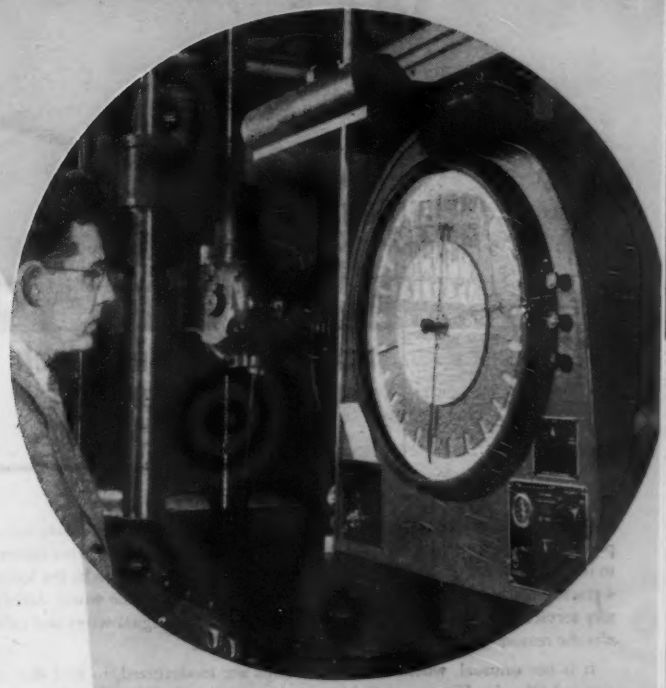

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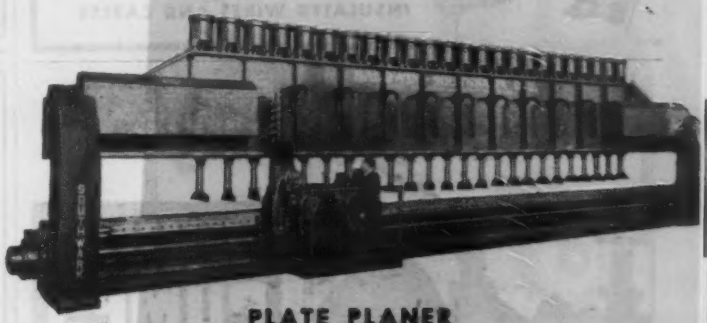
Baldwin testing machines and instruments add to the safety of locomotives, cars, railroad bridges, airplanes and hundreds of other pieces of equipment.



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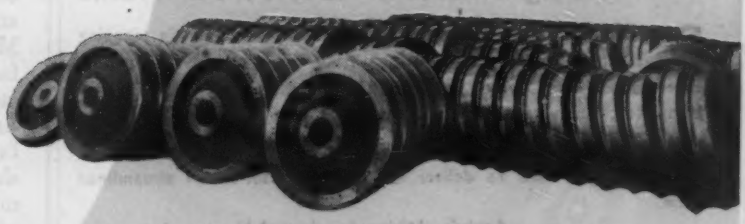
Baldwin-built shop equipment such as plate planers, bending rolls, and hydraulic presses are serving in railroad shops, and in a hundred other industrial fields.



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Half a century ago, Baldwin pioneered in the manufacture of solid wrought steel wheels for locomotives and cars. Baldwin steel forgings and castings for new locomotives or for replacement parts are unsurpassed in quality.

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Okonite Insulated Wires and Cables give such long and satisfactory service, farsighted engineers repeatedly select Okonite products for new or replacement jobs. The Okonite Company, Passaic, New Jersey

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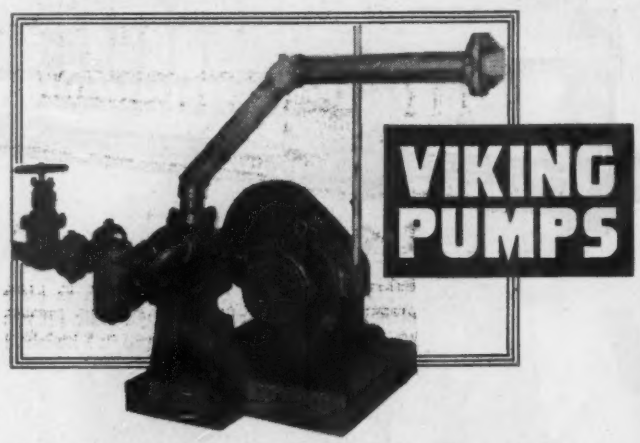

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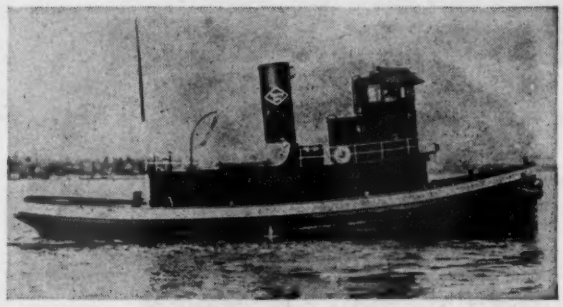

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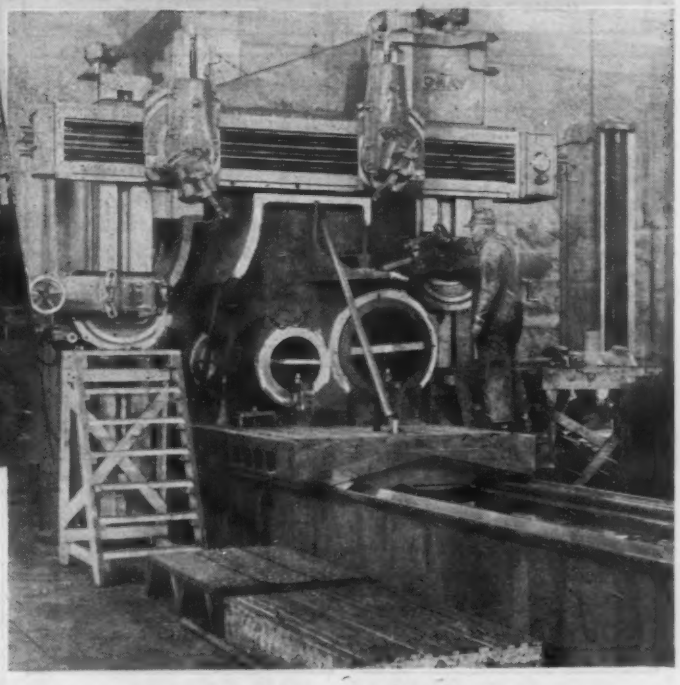

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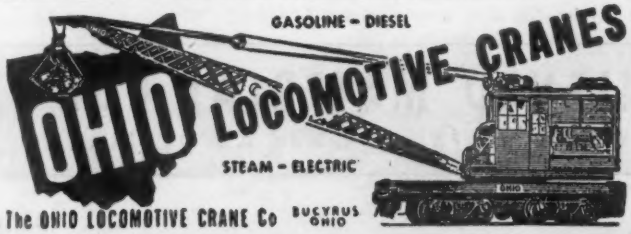

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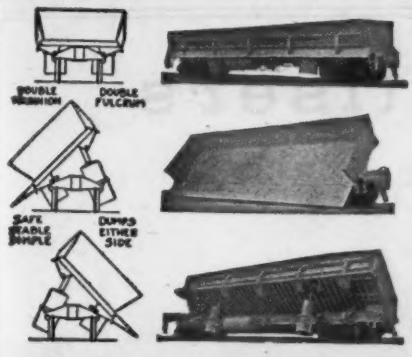

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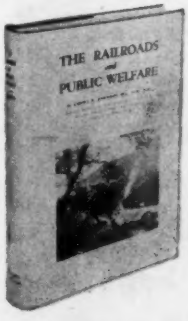

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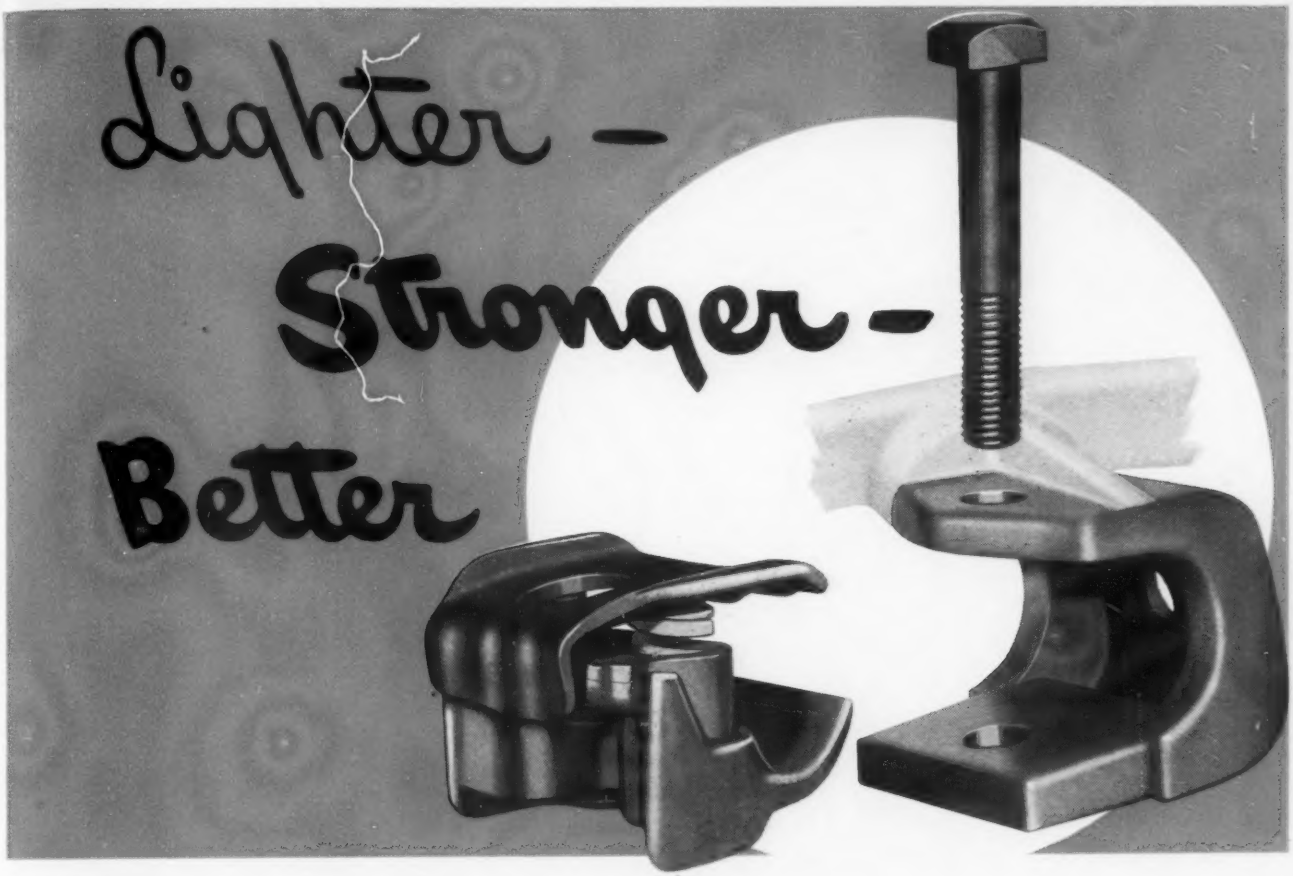

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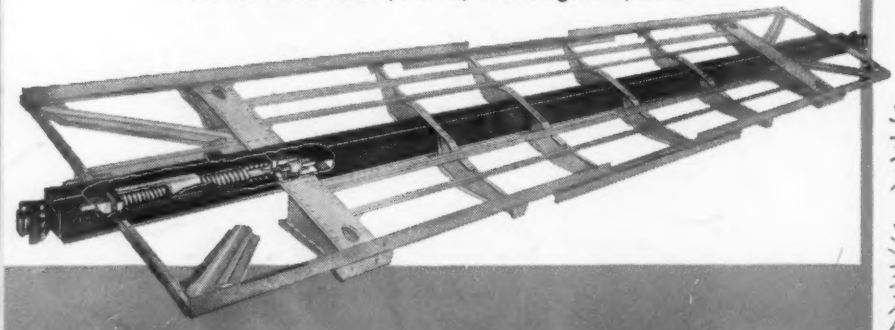

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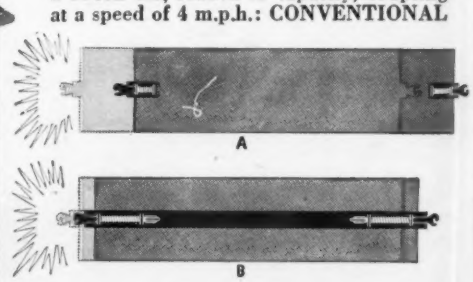

CAR (A): Draft gear "goes solid," car receives almost entire impact.

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